A GUIDE TO THE BIRDS OF NEW ENGLAND AND EASTERN NEW YORK

Ralph Hoffmann

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SPARROW HAWK (perched); SHARP-SHINNED HAWK (flying)

A GUIDE TO THE BIRDS OF NEW ENGLAND AND EASTERN NEW YORK

CONTAINING A KEY FOR EACH SEASON AND SHORT DESCRIPTIONS OF OVER TWO HUNDRED AND FIFTY SPECIES WITH PARTICULAR REFERENCE TO THEIR APPEARANCE IN THE FIELD

BY

RALPH HOFFMANN

Member of the American Ornithologists' Union

WITH FOUR FULL-PAGE PLATES BY LOUIS AGASSIZ FUERTES AND NEARLY ONE HUNDRED CUTS IN THE TEXT

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To

MY MOTHER

PREFATORY NOTE

I AM indebted to a number of friends for assistance and advice in the preparation of this book. Mr. F. H. Allen, Mr. William Brewster, Mr. Walter Faxon, and Dr. C. W. Townsend have read either the entire manuscript or parts of it, and have made valuable suggestions. Miss M. E. Blatchford has also read the manuscript and given much helpful advice. I am indebted to Mr. G. M. Allen for the advance sheets of his "Birds of New Hampshire," which have helped me on points of distribution. Mr. F. M. Chapman has very kindly permitted me to use the dimensions given in his "Birds of Eastern North America." I am indebted to Mr. Brewster and to Mr. Walter Deane for the use of skins in Mr. Brewster's collection, and to Dr. W. McM. Woodworth for the use of skins in the Museum of Comparative Zoölogy. Mrs. Florence Merriam Bailey has kindly permitted the use of cuts which have already appeared in her "Birds of Village and Field."

If this book proves helpful to others, it will pay, vicariously at least, a little of the great debt which I owe to Mr. Walter Faxon, whose instruction and example have been an invaluable guide and stimulus to me in the past.

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INTRODUCTION

A GUIDE TO THE BIRDS OF NEW ENGLAND AND EASTERN NEW YORK

I

THE OBJECT AND PLAN OF THIS GUIDE

THERE is something infectious in the enthusiasm of a student of birds. To hear him talk about the excitement of seeing a new bird, to read his account of it, or, best of all, to go afield with him on a May morning, is often enough to awaken a new interest, which enriches life to a surprising degree. The study of birds presents plenty of difficulties, which add fuel to the flame of real enthusiasm; there are sloughs of despond beyond which the faint-hearted never get. A guide who knows the way, its pitfalls and short cuts, is always welcome, and almost necessary in these days when our only weapon is the opera-glass. In spite of the fact that many excellent books are now available, the author offers another, both in the belief that there can never be too many good guides, and in the hope that this book has been especially adapted to the growing class of beginners in bird study.

The book is the result of experience with many field-classes. Every effort has been made to emphasize the aspect of birds as seen out of doors, to describe their general or most prominent colors rather than any mark difficult to see on the living bird, and to call attention to their characteristic habits and haunts, and thus to enable the conscientious student to answer, with as much certainty as possible, the question,

"What is the bird that I have seen?" The keys and the illustrations have been prepared with this end in view. There has been no attempt to give a complete description of the plumage, as it would look if the bird were held in the hand, nor does the book contain anything like full biographies of each species. Minute descriptions of the plumage and full accounts of the lives of the birds are to be found in many excellent books, some one of which may well be used to supplement this Guide.

Notes and songs have been carefully described, and as far as possible expressed in English syllables. The author is well aware that another listener might express the same sounds by very different syllables; he has not attempted to convey to any one unfamiliar with the song anything more than an idea of its length and accent, and perhaps a suggestion of the quality of its tone. It is hoped, however, that the songs as transcribed will be useful in identifying doubtful species, that any one comparing the transcripts in the book with his own field-notes, or, better still, with the songs themselves, will recognize their likeness to that of one species and their unlikeness to that of another.

The descriptions given in this Guide of the nests and eggs of those birds that breed in New York and New England are not intended to be full or detailed. If a nest and eggs have been found, but no clue to the parent birds has been obtained, these descriptions will not serve as a means of identification; in fact, even a large collection of nests and eggs is sometimes of little use in such a case. The descriptions are merely intended to guide the student in his search for a nest by indicating where it is generally placed, or if the student thinks he has discovered the nest and eggs of a certain species, they will tend to confirm or to dispel his belief.

The book attempts to be a guide for only a restricted region, — eastern New York, northern New Jersey, and New

England. By this narrowing of the field, many species are eliminated which in other manuals bewilder a beginner and often lead him into error. No mention, moreover, is made of birds that are only irregular wanderers to the region.

As the student advances in the study of birds and becomes more familiar with the commoner species and more interested in the subject, he often asks, "Where or how can I see such and such a species, of which I read in Burroughs or Torrey?" In the case of local or rare birds, an attempt has been made in this Guide to direct the student to certain favorable localities where the species will be either surely or probably found; and in every case the kind of country where a species is likely to occur is as fully described as possible.

II

BIRDS AND THEIR SEASONS

Though by far the greater number of our birds spend the winter months south of us, yet a few species of land-birds and many sea-birds find food enough here even in winter to support life. If these species are also found in the same region in summer, they are known as *permanent residents*. Examples of this class are the Chickadee, the Crow, the owls, and the Grouse or Partridge. Several of them are birds that find their food on the limbs or twigs of trees, in the form of dormant insects or their eggs, others feed on the seeds of weeds or grasses, or on the berries or buds of bushes or trees. The owls live on mice or other small mammals. Most of the birds that live chiefly on insects are driven south by the approach of frost.

Besides these resident birds, our winter list includes birds that are found in summer to the northward of us, migrants, in other words, for whom our latitude is far enough south to afford food. Examples of this class are the Shrike, the Golden-crowned Kinglet, and the Tree Sparrow; they are known as *winter visitants*. Another group of birds, including the Crossbills and the Pine Grosbeaks, generally resident in high latitudes, move southward at very irregular intervals, and then become abundant winter visitants.

The first warm days of March melt the snow from the hillsides of central New England and stir the hibernating insects; a few species of birds that have wintered only a few degrees to the south of us, now begin to move northward and arrive in New England; examples are the Bronzed

Grackle and the Red-winged Blackbird. A few Bluebirds and a fairly large number of Song Sparrows winter in southern Connecticut and in the lower Hudson Valley, but in March the number becomes vastly larger, as the army from the south arrives. Most of the winter birds are still here, so that the March list is the winter list plus the March arrivals. In April, a larger number of species arrive from still farther south, but a few of the winter residents now leave for their summer homes, so that they must be subtracted from the April list. May brings back all the birds that have wintered south of us, as far south in many cases as Central or South America. It also drives northward our winter visitants, so that these no longer appear on the list. Some of these, such as the Tree Sparrow, breed outside the limits of the United States, so that they need not enter into our calculations again till they return in the fall; many others, such as the Brown Creeper and the Golden-crowned Kinglet, though they now vanish from Connecticut, Massachusetts, and the lower Hudson Valley, go no farther than the Adirondacks, New Hampshire, Vermont, or Maine to breed; these therefore appear later in the list of the summer birds of those regions. Some of the March *migrants*, too, such as the Fox Sparrow, pass farther north in April beyond the Canadian boundary and do not appear again in our lists till the fall. Others, both of the March and April arrivals, pass into northern New England and New York to breed, but are eliminated from our May list in the southern and central portions of our field.

By the middle of June, all birds are on their breeding grounds; lists of birds seen in the latter half of June and early July include only the permanent residents and the *summer residents*. But inasmuch as the summer birds of northern New York and New England differ so much from those of the rest of the field, as is more fully explained under the heading Distribution, the division of the key

which is especially intended for northern New York and New England is larger for summer than for other seasons.

Many of our summer residents grow less numerous or disappear entirely before the first of September; very few migrants from the north are seen till the middle of the month, when the arrival of the Black-poll Warblers marks the beginning of the return tide. By the middle of October only a few of our summer residents and a few migrants remain, and by the first of December we come back to winter fare. The list for the autumn months will include, therefore, all our permanent residents, all our summer residents, except those that leave before the middle of September, and all the migrants.

III

MIGRATION

The migration of birds is their movement away from their breeding grounds at the close of one breeding season, and their return to it at the approach of the next. Almost all birds move about to a certain extent after they are no longer bound to the neighborhood of the nest, but when an Owl haunts the same swampy forest throughout the year and a Downy Woodpecker wanders no farther from its woodland home than the nearest village, we call such birds non-migratory. The great majority of our birds, however, are forced by lack of food to move southward at the end of summer; some go only a short way, many pass beyond the limits of the United States, a few pass the Equator. It often happens that there are individuals of a species present both in summer and in winter; there are Chickadees, for instance, in New England at all seasons, though it is quite possible that they are not the same individuals — that the more southern have been replaced by some that bred farther north. For our purpose, however, such birds must be considered permanent residents. Some species, Crows for instance, are permanent residents, but are much commoner in summer than in winter.

The wandering away from the breeding ground begins almost as soon as the young are able to fly; Snowbirds often appear in the valleys, a mile or so from spruce growth, as early as the middle of July. During August, many of our resident birds undoubtedly move southward; many have been silent for some time, so that we do not notice their departure. A few species, too, reach us from the north

during July and August, the Solitary Sandpiper and the Great Blue Heron toward the end of July, the Northern Water-thrush and the Yellow-rumped Warbler in August. By the tenth of September, the great stream of northern birds sets in, reaching its height about the first of October, though the Fox and Tree Sparrows do not arrive till late in October. It is safe to say that by the fifteenth of December all the land-birds that intend to move southward have done so. In New England and New York, there is practically no change in bird-life (unless it be a further diminution in number of some wintering species) until the middle of February.

The first arrivals from the south, the Crow Blackbirds, Bluebirds, etc., reach the lower Hudson Valley by the end of February, and the latitude of Boston early in March. These are birds that have wintered within fairly easy reach, in the Carolinas perhaps, or in Virginia. Stormy weather delays them; a warm spell with southwest winds brings them early. All through March and early April other birds which have wintered in the Southern States arrive. In the mean time, birds that have wintered in the tropics have been pushing into the Gulf States or into Florida, and at each warm wave they advance, till in May they flood New York and New England in a great wave. The first warm, fair night following a hot day, or, better still, two successive hot days, between the third and tenth of May, will generally bring the first Orioles; the next such spell of heat will bring all the northern warblers and thrushes. If early May is cool and clear for days, the birds do not arrive in a great body, but slip through in little flocks, almost unnoticed. A cold northeast storm following suddenly on a hot wave makes the best conditions for observing migrants; they are held back in great numbers, and as they feed low in the bushes in such weather, they can be easily studied. About the city of New York, migration is practically over by Decoration Day; a day or two later, the last Black-poll Warbler

and Olive-backed Thrush have left the latitude of Boston. Only two or three rare migrants, the Mourning Warbler, for instance, occur regularly in June.

The above paragraphs deal chiefly with the migration of land-birds; the shore-birds and the sea-birds have somewhat different periods of migration. The sandpipers, plovers, and terns spend the winter to the southward, and return to their breeding grounds for the most part during May. A few species remain to breed off the coasts of New York and New England, but the vast majority pass farther north.

By the middle of July, many of the sandpipers begin to come back, and there is a heavy migration of the shore-birds during August and early September. Numbers of the ducks, loons, grebes, and gulls are winter visitants to our coasts; they begin to pass north in April, and by the end of May all that are going north have left. The gulls begin to come back in August, some of the sea-ducks, loons, and grebes in September, and throughout October there is a steady southward movement; by the first of December the bulk of those that winter farther south have already passed by.

There are several facts about the migration of birds that it is well for the observer to keep in mind. In many species the males precede the females by several days, — in the case of the Red-winged Blackbird by several weeks. If a species is a summer resident of any locality, and also a migrant to more northern regions, the first arrivals are almost always residents which return to the old breeding-places. The earliest Black-throated Green Warbler, therefore, will be found in some grove of pines where the bird breeds, and two weeks later, perhaps, the orchards and open woodland will be full of migrant Black-throated Green Warblers, passing north in company with other northern warblers. The resident birds, moreover, vary greatly in promptness; some one Catbird will be noted as an early bird, singing in his favorite thicket several days before his neighbors arrive. The period of migra-

tion of any one species varies, largely according to the abundance of the species, but also according to some unexplained idiosyncrasy of the bird. The Yellow-rumped Warbler is passing through sometimes for a period of over a month; the first Rusty Blackbird often appears late in March, and the last in early May. Certain birds are seen much less frequently in migration than one would expect from their abundance northward; the Winter Wren and the Sapsucker are examples. Some birds have very different routes in spring and fall; the Connecticut Warbler is almost never found in New England in spring, but is sometimes locally common in the autumn, while the Blackburnian Warbler is much rarer in the autumn than in the spring. Several birds, therefore, the Yellow-bellied Flycatcher and the Bay-breasted Warbler, for instance, occur as not uncommon migrants along the Hudson, or even in the Connecticut Valley, though rare in eastern New England.

The spring is an easier time to identify migrants than the autumn. Nearly all the males are in full song in the spring; very few sing at all in the autumn. Many birds change their plumage in the summer, and lose their bright distinctive marks. And yet, to an enthusiast, there is something very fascinating in the study of the fall migrants. In spring, the bird's song generally betrays his presence for some time before he is seen; but in the autumn one is kept constantly on the alert to discover in the flocks of small restless warblers or sparrows, often dull colored and puzzling, some novelty or rarity.

Perhaps the most interesting experience connected with the study of birds is to hear the notes of migrants passing overhead on clear nights in August and September. The *tsip* of Black-poll Warblers or the *chink* of a Bobolink falling from the darkness, brings home to one with startling impressiveness the wonder of the long journey from northern New England to the Equator and back again.

IV

DISTRIBUTION

The fact that birds are not universally distributed is known to every one interested in natural history; that the Mockingbird is a southern, and not a northern bird is generally understood. The exact limits of the breeding area of any one bird are hardly to be defined even in New England, but the region where it breeds commonly may now be definitely mapped.

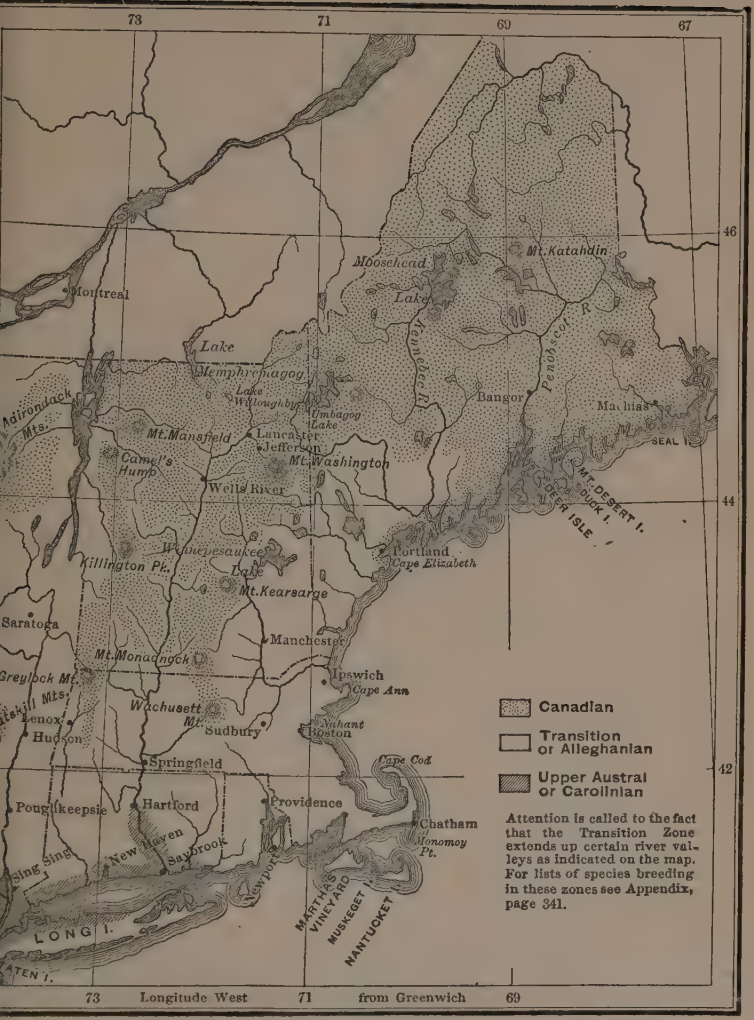
Two important factors must be borne in mind in studying the breeding areas of the birds of New England and New York: the latitude and the altitude. If we pass from New York city through southwestern Connecticut to New Haven, then up the Connecticut Valley to northern Vermont, we note in southern Connecticut the tulip-tree and the sweet gum; in central Connecticut we see them no longer, but we still see oaks and hickories; but by the time we reach Wells River in central Vermont, these too are left behind, and patches of spruce and fir appear on the distant hillsides. We have climbed only 407 feet from the sea, but we have traversed nearly three degrees of latitude, and hence these changes. They are due to a colder and moister climate at a higher latitude. Had we left the train in the Connecticut River Valley, at Greenfield, traveled westward to North Adams, and then climbed Mt. Greylock, almost 3000 feet above the railroad, we should have noted the same changes as we ascended the mountain; the oaks and nut trees would have disappeared, and been replaced by spruce and fir. But here the changes would have been due to altitude.

And as all life is intimately associated, the student of birds would have felt sure from the presence of the sweet gum trees in Fairfield County, Conn., that certain birds, the Southern Water-thrush for example, would be found breeding there, and from the spruces on Greylock or in northern Vermont, that Black and Yellow Warblers nested among them.

To predict what birds will be likely or certain to be found in any one place, we must, therefore, know first its latitude, — southern Connecticut and northern Maine will have few birds in common; next, we must know the altitude of its hills and the character of their vegetation, — if they are high enough to be clothed with spruce, they will be frequented by birds unknown as summer residents in the lowland.

So regularly do certain groups of plants and animals, including birds, confine themselves to certain well-marked regions, that it has been found convenient to employ certain fixed terms to designate the areas where these groups are found. The sweet gum and the Southern Water-thrush are characteristic of the Atlantic Plain from southwestern Connecticut to Florida; they are representatives, therefore, of what is known as the Carolinian or Upper Austral Life Zone. The spruce and the Black and Yellow Warbler occur throughout the forested region of Canada; they are representatives, therefore, in northern New England of the Canadian Life Zone. So closely is the presence or absence of a certain well-marked group of birds correlated with the presence or absence of the spruce and fir, that the nature of the forests becomes the first point one must settle with regard to any locality in southern New Hampshire or Vermont, or northern Massachusetts or New York. The accompanying map shows the extent in New England of the Upper Austral and Canadian Life Zones.

The country between these zones possesses many birds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44
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Montreal
Moosehead
Lake
Mt. Katahdin
Kennebec R.
Penobscot R.
Lake
Memphremagog
Lake
Willoughby
Umbagog
Lake
Bangor
Machias
SEAL I.
Adirondack
Mts.
Mt. Mansfield
Lancaster
Jefferson
Mt. Washington
Camel's
Hump
Wells River
MT. DESERT I.
DUCK I.
DEER ISLE
Winnepesaukee
Lake
Portland
Cape Elizabeth
Killington Pk.
Mt. Kearsarge
Saratoga
Manchester
Mt. Monadnock
Greylock Mt.
Ipswich
Cape Ann
Wachusett
Mt.
Sudbury
Nahant
Boston
Lenox
Hudson
Springfield
Cape Cod
Poughkeepsie
Hartford
Providence
Chatham
Monomoy
Pt.
New Haven
Saybrook
Sing Sing
Newport
MARTHA'S
VINEYARD
MUSKEGET
NANTUCKET
LONG I.
ATEN I.
Canadian
Transition
or Alleghanian
Upper Austral
or Carolinian
Attention is called to the fact that the Transition Zone extends up certain river valleys as indicated on the map. For lists of species breeding in these zones see Appendix, page 341.
73
Longitude West
71
from Greenwich
69

LIFE ZONES

found in each of the neighboring belts, and none not shared by one or the other of them. It has therefore been called the Transition Zone. Its boundaries to the north concern us chiefly, for many birds (see p. 342) cease to be found when we pass from this Transition belt to the Canadian.

Nothing is sharply defined in nature, and so the boundaries of these zones, though they may be well defined on maps, have in the actual country a very indefinite outline, one area fading almost insensibly into another. Moreover, certain birds, though confined to the spruce belt, begin to appear at its very margin, while others demand for a summer home deep spruce forests, or other conditions which are attained only well within the belt. Snowbirds, for instance, usually appear with the first small patches of spruce, in Worcester County, Mass.; Brown Creepers only in large-sized spruce forests, such as occur on Greylock and Monadnock; and Black-poll Warblers not until the Catskill or White Mountain region is reached. Similarly, some of the Carolinian birds, such as the Chat and the Orchard Oriole, are found beyond the range of the others, far up the Housatonic Valley or in eastern Massachusetts.

The range of any particular bird in the breeding season will be found in the account of that bird; in many cases the map which shows the Life Zones will give the area throughout which the bird commonly occurs. Outside this area, the bird may be expected to occur sparingly, in places which approximate to the warmth or dryness of more southern regions, or to the coldness and moisture of the north. Certain lists given in this book (p. 341) should be studied in this connection, and a list is also given on p. 348 of "local lists" which may be either bought, or obtained in large libraries; these give the latest information as to species found breeding in the various localities of which they treat. The student cannot be too strongly urged to make out for himself, by the use of the map and of the lists above mentioned, a list

of the species which may be expected to occur in summer in his locality, and to annotate it, by reference to this Guide, with notes as to the abundance of each species, the kind of country it frequents, and the best field-marks by which to recognize it. He will then be able, when he begins his work in the field, to eliminate a large number of birds from consideration, and save himself from an embarrassment of riches.

V

HINTS FOR FIELD WORK

Any time of year is good to begin the study of birds, though February is perhaps the best time. The number of species to be found in winter is so limited that a beginner can become familiar beforehand with the appearance and favorite haunts of those he is likely to find, so that he will welcome by name the first Golden-crowned Kinglet or Brown Creeper that he sees. The latter part of August and the first half of September, except at the sea-shore, is perhaps the worst time of year for students of birds. Birds are then silent and retiring; one sees few species, but must distinguish them from among a far larger number of candidates than in winter.

Morning, as every one knows, is the best time of day to see and hear birds, but it is not necessary to rise at three or four, unless one wishes to accomplish a great deal in a morning. If one starts before eight there will be, even in summer, two or three hours when birds are fairly active. Between five and seven in the afternoon there is a renewal of song and activity. A high wind, or a steady northwest wind in spring, makes a poor bird day; birds are then silent and retiring. A violent rain, of course, keeps them under cover, but they delight in warm showers.

The first impression a beginner gets on a spring morning is of a confusion of sound, and if he attempts to find the individual songsters, he is often discouraged by the brief glimpses he gets of some distant and departing bird. An experienced student has in the mean time noted the songs of many species, and recognized old friends by a hint of color,

a trick of flight, or some mysterious general effect. Let the beginner patiently continue his walk, keeping, if possible, near mixed growth of trees or bushes, especially near water. Before long he will come upon some bird, or group of birds, busily occupied in feeding, or startle one from the ground to a neighboring twig. Now is his opportunity; if the bird is in good view, let him seize opera-glass, note-book, and pencil, and note everything possible about the stranger. On every walk, though the great majority of birds will tantalize a beginner by their restlessness, some one will favor him with a chance for leisurely survey, and a cataloguing of all its markings. It is frequently possible to draw birds out of thick cover by kissing the back of one's hand, so as to produce a squeaking sound.

After the student has learned the commoner birds, he should begin following up strange sights and sounds. Often the chase is long and futile; but generally, by cautious and persistent stalking, one brief glimpse after another yields the desired total. A new song should be followed to its source and the singer noted. I have then found it helpful to set down in syllables what the bird seemed to my ear to say. This habit not only trains one's ear but also aids in fixing the song, so that it can be recalled.

The secret of rapid progress lies, as in all things, partly in native talent, a quick eye and ear, and a retentive memory, but also in preparation. Each new week in the year, each new place one visits, should be read up beforehand, as one reads up a city in a guide-book. If April is approaching, look through the key for April, and note that one of the Warblers that is now to be looked for has yellow under parts, wags its tail, and has a song like that of the Chipping Sparrow. If besides, one has an opportunity to visit a large museum, and to see the mounted bird, one will have a mental image that will often make instant recognition possible. The study of good drawings of the birds is the next best

preparation. The reading of books like those of Bolles, Burroughs, and Torrey is a great aid, as well as a pleasant stimulus.

Opera-glasses are almost indispensable. The best for bird study magnify about three and a half times ; in other words, the bird is brought that much nearer to you. The Zeiss glasses magnify many more times, and commend themselves by their small compass and large field. For sea-birds which are riding the water in one place, a powerful marine-glass or even a small telescope is useful.

Note-books are indispensable, and it is often well to carry a handbook into the field, so that a bird can be looked up on the spot, and some important point settled, if possible, by examining the bird again and again.

It soon becomes evident to a student that birds are much more plentiful in some spots than others. Often one can learn from others where the best places are; if not, one should try the edges of broad valleys, or the borders of streams where bushes, swamp, and pasture alternate. As a rule, the more diversified the country, the more birds there will be. In winter, warm sheltered hollows are attractive. In migration time it is particularly important to find favorable places.

When a student gets far enough to get the nesting fever, he has an endless and intense pleasure before him. The nesting season treads fast on the heels of the spring migration ; many birds, in fact, have built before the May migrants come. To find nests it is necessary to have found them ; that is to say, after one has been found, it is much easier to find the second, for one knows then where to look. One must, moreover, be constantly on the alert for the slight hints which are often so important. A bird going to and from its nest slips along in a very different fashion from its ordinary careless wandering. A straw or bit of hair in a bird's mouth is a broad hint; sit down at once, and try to beat the bird at a waiting game.

The capacity to take hints grows by practice, as the powers of the eye and ear grow. The rapid identifications of the expert seem marvelous at first, but a beginner soon learns to tell a flying Goldfinch as far as he can see it. As season follows season, his eye, ear, and memory serve him better and better, and at last he too walks through woods and fields, hearing and recognizing distant calls or bits of song, or identifying the passing birds by a glimpse of some well-known bit of color, or by some marked peculiarity of flight.

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VI

HOW TO USE THE KEYS

The following keys include all the common land-birds of New England and eastern New York, except the hawks, the owls, the Mourning Dove, and the game-birds. No one should, however, expect, by the use of these keys, to name with certainty every small bird seen for a few moments at long range or in thick foliage. If a bird is to be identified, it must have been observed clearly enough and long enough for a fairly good description of it to be set down. No one can hope at first to carry an accurate mental picture of even the brightest bird. A note-book should, therefore, be always at hand in the field, and when an unfamiliar or doubtful bird is seen, the size, colors, habits, and habitat should be set down. Note-books arranged for such use can be procured (see list, p. 350).

To estimate the size, compare the bird with an English Sparrow, which is about 6.33 inches long. The Song Sparrow is about as long as an English Sparrow; the Bluebird, a little longer. The Robin, about ten inches long, will serve as a standard of comparison for the larger song-birds.

Birds are classified in the keys, according to color, under the following heads: —

1. **Brown or Brownish** (including reddish-brown).
2. **Gray or Grayish** (including greenish-gray).

I have excluded from both of the above classes any birds which show any clear, bright yellow, such as the female Maryland Yellow-throat, or marked bluish-gray, such as the

Nuthatches, but have included birds that have a more or less faint yellowish wash on the flanks, as the Phœbe in fall, and some of the Vireos.

3. **Yellow or Yellowish without Black.** (No large or prominent area of black.)

4. **Yellow or Orange with Black.**

This class includes chestnut and black. The black appears either in streaks, as in the Prairie Warbler, or in patches, as in the Goldfinch.

5. **Black and White.**

The black and white should form a marked contrast, either in streaks or bars, as in the Black and White Warbler and the Downy Woodpecker, or in large distinct areas, as in the Kingbird.

6. **Black or Blackish.**

This class includes purplish-black, as in the Crow Blackbird and the Purple Martin.

7. **Red, Scarlet, or Rose.**

This class includes all birds that have any such tint at all prominent.

8. **Blue or Bluish-gray** (excluding purplish-black).

A number of birds have been put into more than one class, to guard against oversight, on the part of the observer, of some bit of color. Plain-colored females and young, and bright-colored males of the same species have, of course, been put into separate lists. For the summer months there is a key to the birds seen constantly on the wing, such as the Swallows and the Swift, without reference to their color.

One should also notice carefully any conspicuous patterns of coloration, any stripes, streaks, or contrasts of color, and where they are situated. Many keys are based chiefly on such marks, and they are often necessary for final identification. But some of them are often either overlooked by beginners, or not well displayed by the bird. More

stress has been laid in these keys on a combination of characteristics than on any one set, nor need the failure to note any one mark block the student's way entirely.

After the size, general color, and conspicuous marks have been noted, one should observe any tricks of attitude or gait, such as hopping, walking, tilting the tail, bobbing the head, raising crest-feathers, etc. The bird's feeding habits are also important; one should note whether it scratches for seeds, flies out into the air after insects, or gleans them from the trunk or twigs of trees.

Lastly, one should notice the kind of country in which the bird is seen, whether marsh, meadow, orchard, thicket, or forest. The term plantation is used occasionally in this Guide to designate ground which has been planted with trees and bushes, as on large estates. It is important, in noting the locality where a bird is seen, to look about and see what kind of ground is found near by; a marsh a few rods away will explain the presence of a Red-winged Blackbird in a roadside tree. In times of heavy migration, it is true, a bird may appear almost anywhere, and Swamp Sparrows will turn up in backyards; but, as a rule, the nature of a bird's food forces it, even in migration, to show preference for certain haunts. When a beginner grasps the fact that he will never see a House Wren clinging to a bulrush, or a Marsh Wren in an apple orchard, he may do much in the way of eliminating improbable birds. Another important and much neglected means of assistance in identification is afforded by taking into account the time of year: certain birds are never here in January (exceptions, of course, occur, but may be ignored by the beginner); others are found only in winter. The keys have therefore been arranged so that each season has its own key, and reference should be made only to that; it will sometimes happen, however, that a bird will appear late in one month, though it regularly comes early in the next, and is provided for in the following key.

Under the seasonal heading, there are subdivisions according to color, as already described, and in them the birds are arranged in two groups, in the order of their size: Group A contains birds larger than an English Sparrow; Group B those smaller than an English Sparrow. As a further help in identifying the larger song-birds, the place in the list where a Robin would come is indicated. If the student be in doubt whether a bird be larger or smaller than an English Sparrow, let him study the last birds in Group A, and the first in Group B. If the bird be noticeably small, let him begin the search at the bottom of Group B. The divisions A′ and B′ are to be used only in southern Connecticut and in the lower Hudson Valley; the divisions A″ and B″ only in the northern portions of New York and New England. An asterisk beside the figures which give the size of a bird, indicates that the bird does not occur every year; two asterisks mean that it is very irregular, and more often absent than present.

The figures in the keys indicate in inches and decimals the length of the bird; the keys include, besides, a brief statement of the kind of country in which the bird is generally found, and brief clues for its identification, — some striking field-mark, or constant trick of action. If the bird has been carefully watched under favorable conditions, the search in the key will soon narrow down to a small number of species. If there is still doubt, the descriptions of these species and the accounts of their habits given in the body of the book should be carefully read, the evidence weighed, and a final choice, if possible, be made. A common fault of beginners in identifying from printed descriptions is to ignore some perfectly obvious and insuperable objection. I have known the skin of a Brown Thrush labeled as a Cuckoo, in spite of its spotted breast. Mr. Chapman tells me that the Louisiana Water-thrush has been identified as the Olive-backed Thrush: one is 6.28 inches long, the other 7.17; the extra inch must tell, even in the field.

But birds are often not seen to advantage; it is hoped that in such cases students of this book will learn to be content with the belief that the puzzling bird was probably one of two or three, and wait for another opportunity to settle the matter. No method is more harmful to a real advance in knowledge than the anxiety to get some name or other for every bird seen. The best field ornithologists of my acquaintance are most distinguished by their reluctance to give a decision on insufficient evidence. Yet one can be too timid, and a habit of doubting one's own powers of observation leads to discouragement. If one has a description noted on the spot, it is good mental training to come to some definite decision, to say that the weight of evidence is strongly in favor of this or that species. Certainty will come in time, with widening acquaintance. The beginner must realize, too, that his powers of observation are probably not yet fully developed; his untrained eye is confused by a flying or moving bird, and gets only a glimpse of color, where a skilled observer sees steadily, and discovers the distinctive field-mark.

KEYS

KEYS

NOTE. — The following signs and abbreviations are used in the keys and in the text: —

♂ = male.	Im. = immature.
♀ = female.	* = irregular.
Ad. = adult.	** = very irregular.

Groups A (birds larger than an English Sparrow) and B (birds smaller than an English Sparrow) may be used throughout New England and eastern New York; groups A′ and B′ only in southern Connecticut and the lower Hudson Valley; groups A″ and B″ only in the northern portions of New York and New England. (See p. 25.)

No provision has been made in the keys for birds in immature plumage; in the autumn and winter in most cases where the female (♀) is specified, young males may be included in the same category.

The occasional dates of arrival or departure given in the keys are, of course, only approximate, and will vary according to the season and to latitude. One may also expect a variation of about ten per cent. each way in the lengths of birds given in the keys and text.

KEY FOR WINTER

Brown or Brownish.

A.

12.00. Flies to or from trees; rump white . . . . p. 216. **Flicker.**

10.75. Only where there is little snow; feeds in grass; shows white tail-feathers in flight . . . . . p. 190. **Meadowlark.**

10.00. Head black; breast bay . . . . . p. 73. **Robin.**

7.75. On or near the beach; throat yellow . . . p. 200. **Shore Lark.**

7.19. In flocks in trees; plump, sleek; eats fruit p. 139. **Cedar-bird.**

A′.

8.25. (As far north as Central Park, N. Y.) Crest, wings, and tail tinged with reddish . . . . . p. 151. ♀ **Cardinal.**

7.17. Low in thickets; tail reddish-brown; breast white, spotted. p. 74. **Hermit Thrush.**

6.74. Scratches on ground; tail brown; throat white. p. 163. **White-throated Sparrow.**

[6.33. Size of English Sparrow.]

B.

6.36. In small flocks on ground; wing-bars white; breast unstreaked, with small dusky spot in centre . . p. 162. **Tree Sparrow.**

6.30. Skulks in marshes or brush heaps; breast streaked, with dark blotch in centre . . . . . p. 157. **Song Sparrow.**

6.27. Brownish-gray; in flocks with slate-gray males; outer tail-feathers white . . . . . p. 158. ♀ **Junco.**

6.25. Only in beach grass . . . . . p. 171. **Ipswich Sparrow.**

5.66. Clings close to tree-trunks . . . . . p. 88. **Brown Creeper.**

5.65. In small flocks; common near sea-shore or in bayberry patches; rump yellow . . . . . p. 120. **Myrtle Warbler.**

5.32.** Grayish-brown; feeds in birches or in weed-patches; adults have dark red crown . . . . . p. 178. **Redpoll.**

5.10. In small flocks in trees or on ground; call-notes sweet; flies high when startled; wings and tail black and white. p. 177. **Goldfinch.**

B′.

5.50. Skulks in brush heaps; whistles loudly; conspicuous whitish line over eye . . . . . p. 94. **Carolina Wren.**

4.06. Skulks in brush heaps or walls; dark brown and very small. p. 91. **Winter Wren.**

B."

5.35. In small flocks in trees; crown dark brownish-gray.
p. 83. **Hudsonian Chickadee.**

Gray or Grayish.

A.

10.32. On tops of trees or bushes; upper parts gray; wings black and white.
p. 138. **Northern Shrike.**

10.00. Back gray; head black; breast bay . . . . . p. 73. **Robin.**

9.08.** Slaty-gray; wing-bars white . . p. 183. ♀ **Pine Grosbeak.**

A."

12.00. In woods, often about logging camps; forehead white; nape black.
p. 197. **Canada Jay.**

[6.33. **Size of English Sparrow.**]

B.

6.27. In flocks on the ground; head and breast dark slate-gray; outer tail-feathers white . . . . . p. 158. **Junco**

6.22. In trees, often with red males; brownish-gray; streaked.
p. 181. ♀ **Purple Finch.**

6.19.* In or under trees, generally in conifers; often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill**

6.05.** In or under trees, generally conifers; often with red males; wing-bars white; rump greenish-yellow.
p. 179. ♀ **White-winged Crossbill.**

5.00.* In flocks in trees; under parts streaked; bar on wing yellow.
p. 174. **Pine Siskin.**

4.07. Restless in trees and thickets; top of head yellow or orange, enclosed in black; wing-bars white.
p. 81. **Golden-crowned Kinglet.**

B'.

6.00. (North as far as Orange, N. J., and Staten Island.) In trees; upper parts gray; crest conspicuous . . p. 85. **Tufted Titmouse.**

Yellow.

A.

7.75. In flocks; generally only on or near the sea-shore; throat and line over eye sulphur-yellow . . . . . p. 200. **Shore Lark.**

Black and White.

A.

10.32. On tops of trees or bushes; upper parts gray; wings and tail black and white . . . . . p. 138. **Northern Shrike.**

[10.00. **Size of Robin.**]

9.40. On trunks or large limbs; white stripe down middle of back; wings barred with black and white . . p. 224. **Hairy Woodpecker.**

6.83. Similar to above, but commoner and smaller.
p. 223. **Downy Woodpecker.**

6.88. In flocks, generally only on or near sea-shore; wings and tail black with much white . . . . . p. 174. **Snow Bunting.**

A''.

8.75. On trunks and large limbs; back barred with black and white.
p. 221. **American Three-toed Woodpecker.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On trunks or limbs; crown black; back bluish-gray; under parts white . . . . . p. 86. **White-bellied Nuthatch.**

5.27. In trees; top of head and throat black; sides of head white; wings gray . . . . . p. 84. **Chickadee.**

4.62. On trunks or limbs; crown and line through eye black; back bluish; under parts reddish-brown or buffy.
p. 85. **Red-bellied Nuthatch.**

Black.

A.

19.30. Entire plumage black . . . . . p. 196. **Crow.**

A'.

8.50. (Only near New York city or Long Island Sound.) Walks on ground; purplish or greenish at close range; feathers of upper parts heavily spotted with buff; bill blackish-brown . . . p. 195. **Starling.**

A'

17.00. Entire plumage black, except a red crest and a white bar on wing.
p. 219. **Pileated Woodpecker.**

9.50. On trunks and large limbs; back black; wings and tail black and white . . . . . p. 222. **Arctic Three-toed Woodpecker.**

Red, Scarlet, or Rose.

A.

10.00. Head black; breast bay . . . . . p. 73. **Robin.**

9.08.** Entire plumage rose-red; brightest on head and rump: wing-bars white . . . . . p. 183. **Pine Grosbeak.**

A'.

8.25. (As far north as Central Park, N. Y.) Entire plumage red or reddish; crest conspicuous . . . . . p. 151. **Cardinal.**

[6.33. **Size of English Sparrow.**]

B.

6.22. In or under trees; entire upper parts and throat crimson; brightest on head and rump . . . . . p. 181. **Purple Finch.**

6.19.* Entire bird vermilion-red; regular in northern New England.
p. 180. **American Crossbill.**

6.05.** Entire bird rose-red; wing-bars white; not so uncommon in northern New England . . . p. 179. **White-winged Crossbill.**

5.32.** In flocks in birches or in weeds; crown dark crimson; breast and rump often pink . . . . . p. 178. **Redpoll.**

4.62. On limbs of trees; back bluish; head black; line over eye white; under parts reddish-brown . . . . p. 85. **Red-bellied Nuthatch.**

Blue.

A.

11.74. In woodland or in trees near houses; much white in wings and tail. p. 198. **Blue Jay.**

A'.

7.00. Upper parts bright blue; breast reddish-brown. p. 71. ♂ **Bluebird.**

7.00. Upper parts grayish; wings and tail bluish; breast pale reddish-brown . . . . . p. 71. ♀ **Bluebird.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On trunks or limbs; back bluish-gray; crown black; under parts white . . . . . p. 86. **White-bellied Nuthatch.**

4.62.* On trunks or limbs; back bluish-gray; crown and line through eye black; under parts reddish-brown or buffy; less irregular in northern New England . . . . . p. 85. **Red-bellied Nuthatch.**

KEY FOR MARCH

Brown or Brownish.

A.

12.00. Flies from or to trees; rump white . . . . . p. 216. **Flicker.**

10.75. Whistles in tree-tops; feeds in grass; shows white tail-feathers. p. 190. **Meadowlark.**

10.00. Head black; breast bay . . . . . p. 73. **Robin.**

7.75. On or near the beach; throat yellow . . p. 200. **Shore Lark.**

7.26. (Arrives about March 15.) Scratches on the ground; tail reddish-brown; breast spotted . . . . . p. 154. **Fox Sparrow.**

7.19. In flocks in trees; plump, sleek; eats fruit. p. 139. **Cedar-bird.**

A′.

8.25. (As far north as Central Park, N. Y.) Crest, wings, and tail tinged with reddish . . . . . p. 151. ♀ **Cardinal.**

7.17. Low in thickets; tail reddish-brown; breast spotted; not common. p. 74. **Hermit Thrush.**

6.74. Scratches on ground; tail brown; throat white. p. 163. **White-throated Sparrow.**

[6.33. **English Sparrow.**]

B.

6.36. In flocks on the ground; wing-bars white; breast unstreaked, with small dusky spot in centre . . . . p. 162. **Tree Sparrow.**

6.30. Sings a bright song from bush or small tree; breast streaked with dark blotch in centre . . . . . p. 157. **Song Sparrow.**

6.27. Brownish-gray; in flocks with slate-gray males; outer tail-feathers white . . . . . p. 158. ♀ **Junco.**

6.25. Only in beach grass . . . . . p. 171. **Ipswich Sparrow.**

5.66. Clings close to tree-trunks . . . . . p. 88. **Brown Creeper.**

5.65. In small flocks; common near sea-shore or in bayberry patches; rump yellow . . . . . p. 120. **Myrtle Warbler.**

5.32.** Grayish-brown; feeds in birches or in weed-patches; adults with dark red crown . . . . . p. 178. **Redpoll.**

5.10. In small flocks in trees or on the ground; call-notes sweet; flies high when startled; wings and tail black and white. p. 177. **Goldfinch.**

B′.

5.50. (Very rare in New England.) Skulks in brush; whistles loudly; conspicuous whitish line over eye . . . p. 94. **Carolina Wren.**

4.06. Skulks in brush heaps or walls; dark brown and very small.
p. 91. **Winter Wren.**

B''.

5.35. In small flocks in trees; crown dark brownish-gray.
p. 83. **Hudsonian Chickadee.**

Gray or Grayish.

A.

10.32. On tops of trees or bushes; upper parts gray; wings and tail black.
p. 138. **Northern Shrike.**

10.00. Back gray; head black or gray; breast bay . . p. 73. **Robin.**

9.08.** Slaty-gray; wing-bars white . . p. 183. ♀ **Pine Grosbeak.**

6.99. (Arrives after March 15.) Brownish-gray; about farm-buildings or near water; tail frequently jerked; note *phœ'bee.*
p. 206. **Phœbe.**

A''.

12.00. In woods, often about logging-camps; forehead white; nape black.
p. 197. **Canada Jay.**

[6.33. **Size of English Sparrow.**]

B.

6.27. In flocks on the ground; head and breast dark slate-gray; outer tail-feathers white . . . . . p. 158. **Junco.**

6.22. In trees; often with red males; brownish-gray, streaked.
p. 181. ♀ **Purple Finch.**

6.19.* In trees; generally in conifers, often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill.**

6.05.** In or under trees; generally in conifers, often with red males; wing-bars white; rump greenish-yellow.
p. 179. ♀ **White-winged Crossbill.**

5.00.* In flocks in trees; under parts streaked; bar on wing yellow.
p. 176. **Pine Siskin.**

4.07. Restless in trees; top of head yellow or orange, inclosed in black; wing-bars white . . . . p. 81. **Golden-crowned Kinglet.**

B'.

6.00. (North as far as Orange, N. J., and Staten Island.) In trees; upper parts gray; crest conspicuous . . p. 85. **Tufted Titmouse.**

Yellow.

A.

7.75. In flocks, generally only on or near the sea-shore; throat and line over eye sulphur-yellow . . . . . p. 200. **Shore Lark.**

Black and White.

A.

10.32. On tops of trees or bushes; upper parts gray; wings and tail black and white . . . . . p. 138. **Northern Shrike.**

[10.00. Size of Robin.]

9.40. On trunks or large limbs; wings barred with black and white; stripe of white down middle of back . p. 224. **Hairy Woodpecker.**

6.83. Similar to above, but commoner and smaller. p. 223. **Downy Woodpecker.**

6.88. In flocks, generally only on or near the sea-shore; wings and tail black with much white . . . . . p. 174. **Snow Bunting.**

A''.

8.75. On trunks and large limbs; back barred with black and white. p. 221. **American Three-toed Woodpecker.**

[6.33. Size of English Sparrow.]

B.

6.07. On limbs or trunks; crown black; back bluish-gray; under parts white . . . . . p. 86. **White-bellied Nuthatch.**

5.27. In trees; top of head and throat black; sides of head white; wings gray . . . . . p. 84. **Chickadee.**

4.62. On trunks or limbs; crown and line through eye black; back bluish; under parts reddish-brown or buffy. p. 85. **Red-bellied Nuthatch.**

Black.

A.

19.30. Entire plumage black . . . . . p. 196. **Crow.**

12.00–13.50. In flocks in evergreens or *walking* on ground; tail long; head lustrous blue-black . . . . p. 184. **Crow Blackbird.**

[10.00. Size of Robin.]

9.55. Near water; no red or white on wing; eye white. p. 186. **Rusty Blackbird.**

9.51. Near water; red on shoulders or white bar on upper wing; note *okaree* . . . . . p. 191. **Red-winged Blackbird.**

7.92. On the ground in fields, or flying over, or lighting in trees; head dark, rich brown . . . . . p. 192. **Cowbird.**

A'.

8.50. (Only near New York city and Long Island Sound.) Walks on ground; purplish or greenish at close range; feathers of upper parts heavily spotted with buff; bill blackish-brown . . p. 195. **Starling.**

A''.

17.00. Entire plumage black, except a red crest, and a white bar on wing. p. 219. **Northern Pileated Woodpecker.**

9.50. On trunks and large limbs; back black; wings and tail black and white . . . . p. 222. **Arctic Three-toed Woodpecker.**

Red, Scarlet, or Rose.

A.

10.00. Head black or gray; breast bay . . . . . p. 73. **Robin.**

9.08. A.** Entire plumage rose-red; brightest on head and rump; wing-bars white . . . . . p. 183. **Pine Grosbeak.**

A'.

8.25. (As far north as Central Park.) Entire plumage red or reddish; crest conspicuous . . . . . p. 151. **Cardinal.**

[6.33. **Size of English Sparrow.**]

B.

6.22. In or under trees; entire upper parts and throat crimson; brightest on head and rump . . . . . p. 181. **Purple Finch.**

6.19.* Entire bird vermilion-red; regular in northern New England. p. 180. **American Crossbill.**

6.05.** Entire bird rose-red; wing-bars white, not so uncommon in northern New England . . . p. 179. **White-winged Crossbill.**

5.32.** In flocks in birches or in weedy patches; crown dark crimson; breast and rump often pink . . . p. 178. **Redpoll Linnet.**

4.62. On limbs of trees; back bluish; head black; line over eye white; under parts reddish-brown . p. 85. **Red-bellied Nuthatch.**

Blue.

A.

11.74. In woodland, or in trees near houses; much white in wings and tail. p. 198. **Blue Jay.**

7.00. Upper parts bright blue; breast reddish-brown. p. 71. ♂ **Bluebird.**

7.00. Upper parts grayish; wings and tail bluish; breast pale reddish-brown . . . . . p. 71. ♀ **Bluebird.**

B.

6.07. On trunks or limbs; back bluish-gray; crown black; under parts white . . . . . p. 86. **White-bellied Nuthatch.**

4.62.* On trunks or limbs; back bluish-gray; crown and line through eye black; under parts reddish-brown or buffy; less irregular in northern New England . . . . p. 85. **Red-bellied Nuthatch.**

KEY FOR APRIL

Brown or Brownish.

A.

12.00. Flies to and from trees; rump white . . . . p. 216. **Flicker.**

11.42. Upper parts reddish-brown; tail very long; flies into bushes when disturbed . . . . . p. 95. **Brown Thrasher.**

10.75. Whistles in tree-tops, or from posts; feeds in the grass; outer tail-feathers white . . . . . p. 190. **Meadowlark.**

10.00. Wings brownish; head black; breast bay . . p. 73. **Robin.**

8.00. (Arrives April 20.) A large swallow, living in boxes set on poles; with blue-black males . . . . . p. 146. ♀ **Purple Martin.**

7.92. *Walking* on ground, or lighting in trees; generally with black males; breast unstreaked . . . . . p. 192. ♀ **Cowbird.**

7.75. (Leaves April 10.) In flocks, on or near the sea-shore; throat yellow. p. 200. **Shore Lark.**

7.26. (Leaves April 20.) Fox-color; breast heavily spotted; scratches on ground . . . . . p. 154. **Fox Sparrow.**

7.19. In flocks in trees; plump, sleek; eats fruit . p. 139. **Cedar-bird.**

7.17. On the ground, or on low limbs; breast spotted; tail reddish-brown. p. 74. **Hermit Thrush.**

6.99. About farm-buildings, or near water; tail frequently jerked; note *phœ'bee* . . . . . p. 206. **Phœbe.**

6.74. (Arrives April 20.) In flocks; scratches on the ground; throat white; tail brown . . . . . p. 163. **White-throated Sparrow.**

[6.33. **Size of English Sparrow.**]

B.

6.36. In flocks on the ground; wing-bars white; dusky spot on unstreaked breast . . . . . p. 162. **Tree Sparrow.**

6.30. Singing from bush or low tree, or feeding on ground; dark blotch in centre of streaked breast . . . . . p. 157. **Song Sparrow.**

6.27. Brownish-gray; in flocks with slate-gray males; outer tail-feathers white . . . . . p. 158. ♀ **Junco.**

6.25. (Leaves April 10.) Only in beach grass. p. 171. **Ipswich Sparrow.**

6.12. In pastures and near cultivated fields; breast streaked; outer tail-feathers white . . . . . p. 172. **Vesper Sparrow.**

5.89. In marshes; breast unstreaked; crown chestnut. p. 155. **Swamp Sparrow.**

5.68. In bushy pastures, and cedar-covered hillsides; breast unstreaked; song sweet and clear . . . . . p. 160. **Field Sparrow.**

5.68. In grass-land; breast streaked . . p. 170. **Savanna Sparrow.**

5.66. Clinging close to trunks of trees . . . p. 88. **Brown Creeper.**
5.65. In small flocks; often in bayberry bushes near the sea-shore. p. 120. ♀ **Myrtle Warbler.**
5.37. Near houses or farming land, or in cedars; breast unstreaked; song unmusical . . . . . p. 161. **Chipping Sparrow.**
5.32.** Brownish-gray; in restless flocks; feeds in birches or in weedy patches . . . . . p. 178. **Redpoll.**
5.10. In flocks in trees, or in weedy patches; throat tinged with yellow; wings black and white . . . . . p. 177. **Goldfinch.**
4.06. (Arrives April 10.) Dark brown; skulks in brush-heaps or in stone walls . . . . . p. 91. **Winter Wren.**

B'.

5.50. (Very rare in New England.) Skulks in brush; whistles loud; conspicuous whitish line over eye . . p. 94. **Carolina Wren.**

B''.

5.35. In trees; crown dark brownish-gray. p. 83. **Hudsonian Chickadee.**

Gray or Grayish.

A.

10.00. Back gray; head black, or dark gray; breast bay. p. 73. **Robin.**
7.92. Light brownish-gray; unstreaked; generally with black males. p. 192. ♀ **Cowbird.**
6.99. Brownish-gray; about farm buildings, or near water; tail frequently jerked; note *phœ'bee* . . . . . p. 206. **Phœbe.**

A''.

12.00. In woods; often about logging-camps; forehead white; nape black. p. 197. **Canada Jay.**
10.32. On tops of trees or bushes; wings and tail black and white. p. 138. **Northern Shrike.**
9.00. Rare, except in western Vermont; similar to above. p. 137. **Loggerhead Shrike.**
9.08. Slaty-gray; wing-bars white . . . p. 183. ♀ **Pine Grosbeak.**
[6.33. **Size of English Sparrow.**]

B.

6.27. In flocks on the ground; head and breast dark gray; outer tail-feathers white . . . . . p. 158. **Junco.**
6.22. In trees; often with rose-red males; brownish-gray; streaked. p. 181. ♀ **Purple Finch.**
6.19.* In trees; generally conifers; often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill.**
6.05.** In flocks; generally in conifers; often with rose-red males; wing-bars white; rump greenish-yellow. p. 179. ♀ **White-winged Crossbill.**

5.61. (Arrives April 15.) In trees; head slaty-gray; line to and around eye white . . . . . p. 132. **Solitary Vireo.**

5.41. (Arrives April 20.) Perches in trees in flycatcher fashion; wing-bars white; note sharp, *tse-bic'* . . . . p. 202. **Least Flycatcher.**

5.00.* In flocks in trees; under parts streaked; bar on wing yellow. p. 176. **Pine Finch.**

4.41. (Arrives April 10.) Restless in trees and thickets; song loud and musical; eye prominent . . p. 80. **Ruby-crowned Kinglet.**

4.07. Restless in trees and thickets; top of head yellow or orange, inclosed in black; note *tsee-tsee-tsee*. p. 81. **Golden-crowned Kinglet.**

B'.

6.28. Along water-courses; under parts streaked with black; tail constantly tilted; song loud and ringing. p. 107. **Louisiana Water-thrush.**

Yellow without Black.

[6.33. **Size of English Sparrow.**]

B.

5.65. In trees; rump, crown-patch, and patches on sides of upper belly yellow; throat white . . . . . p. 120. **Myrtle Warbler.**

5.52. In pines: occasionally on the ground; wing-bars white; throat yellow . . . . . p. 111. **Pine Warbler.**

5.43. In trees; often on the ground; crown chestnut; under parts bright yellow; tail constantly wagged . . . p. 110. **Palm Warbler**

Black and White.

A.

[10.00 **Size of Robin.**]

9.40. On trunks or large limbs; white stripe down middle of back; wings barred with black and white . . p. 224. **Hairy Woodpecker.**

8.56. On trunks or large limbs; back speckled with black and white; white stripe along edge of wing . . . . . p. 220. **Sapsucker.**

8.35. Head black; tail black and white; scratching on the ground near bushes . . . . . p. 152. **Towhee.**

6.83. On trunks or large limbs; white stripe down middle of back; wings barred with black and white . p. 223. **Downy Woodpecker.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On limbs or trunks; crown black; back bluish-gray; under parts white . . . . . p. 86. **White-bellied Nuthatch.**

5.65. In trees; throat white; black patches on sides of upper breast; sides of belly, crown patch, and rump, yellow. p. 120. **Myrtle Warbler.**

5.30. On trunks or large limbs; striped black and white. p. 129. **Black and White Warbler.**

5.27. In trees; top of head and throat black; cheeks white; wings gray. p. 84. **Chickadee.**

4.62. On trunks or large limbs; crown and line through eye black; back bluish; under parts reddish-brown or buffy. p. 85. **Red-bellied Nuthatch.**

A''.

12.00. In woods; often about logging-camps; forehead white; nape black. p. 197. **Canada Jay.**

10.32. On tops of trees or bushes; wings and tail black and white. p. 138. **Northern Shrike.**

8.75. On trunks and large limbs; back barred with black and white. p. 221. **American Three-toed Woodpecker.**

Black.

A.

19.30. Entire plumage black . . . . . p. 196. **Crow.**

12–13.50. In flocks in evergreens, or *walking* on ground; tail long; head lustrous blue-black . . . . . p. 184. **Crow Blackbird.**

[10.00. **Size of Robin.**]

9.55. In flocks near water; no red or white on wing; eye white. p. 186. **Rusty Blackbird.**

9.51. Near water; red on shoulders or white bar on upper wing; note *okaree* . . . . . p. 191. **Red-winged Blackbird.**

8.00. (Arrives April 20.) Entire body blue-black; a large swallow, living in boxes set on poles . . . . . p. 146. **Purple Martin.**

7.92. On the ground in fields, or flying over, or lighting in trees; head dark, rich brown . . . . . p. 192. **Cowbird.**

A'.

8.50. (Only near New York city or Long Island Sound.) Walks on ground; purplish or greenish at close range; feathers of upper parts tipped with buff; bill yellow . . . . . p. 195. ♂ **Starling.**

8.50. Similar to above; more heavily spotted below. p. 195. ♀ **Starling.**

A''.

17.00. Entire plumage black, except a red crest, and a white bar on wing. p. 219. **Northern Pileated Woodpecker.**

9.50. On trunks or large limbs; back black; wings and tail black and white . . . . . p. 222. **Arctic Three-toed Woodpecker.**

Red, Scarlet, or Rose.

10.00. Head black or gray; breast bay . . . . . p. 73. **Robin.**

8.56. On trunks or large limbs; whole top of head, and in male, throat dark red; back speckled black and white . p. 220. **Sapsucker.**

8.35. On ground near bushes, or singing in trees; head black; sides of breast and belly chestnut; tail black and white. p. 152. **Towhee.**

A'.

8.25. (As far north as Central Park, N. Y.) Entire plumage red or reddish; crest conspicuous . . . . . p. 151. **Cardinal.**

A''.

9.08. Entire bird rose-red; wing-bars white . p. 183. **Pine Grosbeak.**

[6.33. **Size of English Sparrow.**]

B.

6.22. In trees or feeding on ground; entire upper parts and throat crimson; brightest on head and rump . . . p. 181. ♂ **Purple Finch.**

6.19.* Entire bird vermilion-red; regular in northern New England. p. 180. **American Crossbill.**

6.05.** Entire bird rose-red; wing-bars white; not so irregular in northern New England . . . . . p. 179. **White-winged Crossbill.**

5.32.** In flocks in birches or in weedy patches; crown dark crimson; breast and rump often pink . . . . . p. 178. **Redpoll.**

4.62.* On limbs of trees; back bluish; head black; line over eye white; under parts reddish-brown . p. 85. **Red-bellied Nuthatch.**

Blue.

A.

13.02. Near water; much white showing in wings and tail; bill long and pointed . . . . . p. 224. **Kingfisher.**

11.74. In woodland, or in trees near houses; much white in wings and tail. p. 198. **Blue Jay.**

[10.00. **Size of Robin.**]

8.00. Blue-black. (See under Black) . . . p. 146. **Purple Martin.**

7.00. Upper parts deep blue; breast reddish-brown. p. 71. ♂ **Bluebird.**

7.00. Upper parts grayish; wings and tail bluish. p. 71. ♀ **Bluebird.**

6.95. Upper parts deep blue; tail long and deeply forked; throat chestnut; rest of under parts whitish or salmon. p. 144. **Barn Swallow.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On trunks and limbs; back bluish-gray; crown black; under parts white . . . . . p. 86. **White-bellied Nuthatch.**

5.90. Upper parts greenish-blue; tail merely notched; under parts white. p. 143. **Tree Swallow.**

4.62.* On trunks and limbs; back bluish; crown and line through eye black; under parts reddish-brown or buffy. p. 85. **Red-bellied Nuthatch.**

KEY FOR MAY

Brown or Brownish.

A.

12.20 or 11.83 } In trees; very slender; tail long; under parts white.
p. 227. **Yellow-billed Cuckoo.**
p. 226. **Black-billed Cuckoo.**

12.00. Flies from or to trees; rump white . . . . p. 216. **Flicker.**

11.42. Reddish-brown; tail long; sings high in trees; flies into bushes when disturbed . . . . . p. 95. **Thrasher.**

10.75. Whistles in tree-tops, or from posts; feeds in grass; outer tail-feathers white . . . . . p. 190. **Meadowlark.**

9.75. Flutters from ground in woods; band across neck white.
p. 213. **Whip-poor-will.**

9.01. In trees; notes loud and harsh; belly yellow; tail reddish-brown.
p. 207. **Crested Flycatcher.**

8.35. On ground, or in thickets; tail-feathers tipped with white; flanks reddish-brown . . . . . p. 152. ♀ **Chewink.**

8.29. On ground or on low limbs; head reddish-brown; breast white; spotted with black; song beautiful . p. 79. **Wood Thrush.**

8.25. (North as far as Central Park, N. Y.) Crest, wings, and tail tinged with reddish . . . . . p. 151. ♀ **Cardinal.**

8.12. In trees; streaked with grayish; whitish line over eye; white wing-bar; bill very large . . p. 150. ♀ **Rose-breasted Grosbeak.**

8.00. Near swampy ground; blackish-brown; often with black red-shouldered males . . . . . p. 191. ♀ **Red-winged Blackbird.**

7.52. In wet woods; upper parts tawny-brown; breast not distinctly spotted.
p. 78. **Wilson's Thrush.**

7.58–7.00. On ground or low limbs; breast white, spotted with black; upper parts grayish-brown . p. 77. **Gray-cheeked Thrush.**

7.17. Like above, but eye-ring white; cheek buffy.
p. 76. **Olive-backed Thrush.**

7.17. (Generally only till May 10.) On ground, or low limbs; breast white, spotted with black; tail reddish-brown, often slowly raised.
p. 74. **Hermit Thrush.**

7.25. Grayish-brown; *walking* on ground, or lighting in trees, often with black males . . . . . p. 192. ♀ **Cowbird.**

7.19. In trees; often in flocks; head and throat rich brown; belly yellowish; tail-feathers tipped with yellow; head crested.
p. 139. **Cedar-bird.**

7.12. In grassy fields; under parts yellowish-brown, unstreaked; generally with black and white males . . . p. 193. ♀ **Bobolink.**

6.99. About farm-buildings, or near water; tail constantly jerked; flies out into the air after insects . . . . . p. 206. **Phœbe.** †

6.88. Feeds on ground; head marked with bright black and white; no yellow line over eye; throat not white.
p. 164. **White-crowned Sparrow.**

6.74. Feeds on ground; head marked with bright black and white; line over eye yellow; throat white.
p. 163. **White-throated Sparrow.**

[6.33. **Size of English Sparrow.**]

B.

6.30. Wherever there are bushes and water; breast streaked, with dark blotch in centre . . . . . p. 157. **Song Sparrow.** †

6.23. In trees; entire under parts grayish-white, unstreaked.
p. 136. **Red-eyed Vireo.**

6.17. In dry woods; on ground or low limbs; breast streaked with black.
p. 108. **Oven-bird.**

6.12. In pastures or near cultivated fields; breast streaked; outer tail-feathers white . . . . . p. 172. **Vesper Sparrow.**

5.89. In marshes; breast dark, unstreaked; crown chestnut.
p. 155. **Swamp Sparrow.**

5.85. In salt marshes . . . . . p. 167. **Sharp-tailed Sparrow.**

5.80. In trees; common in village streets; entire under parts white, unstreaked . . . . . p. 134. **Warbling Vireo.**

5.68. In grass-land; breast streaked . . p. 170. **Savanna Sparrow.**

5.68. In bushy pastures and hillsides; often in cedars; breast unstreaked; song musical . . . . . p. 160. **Field Sparrow.**

5.59. In bushes or small trees; unstreaked; tail nervously twitched to the side . . . . . p. 149. ♀ **Indigo-bird.**

5.52. In pines; upper parts brownish; under parts dull whitish; wing-bars dull white . . . . . p. 111. ♀ **Pine Warbler.**

5.38. (Not common north of latitude of Boston.) In dry sterile fields; breast buffy, unstreaked; song insect-like.
p. 169. **Grasshopper Sparrow.**

5.37. Near houses or farming land, or in cedars; breast ashy, unstreaked; song unmusical . . . . . p. 161. **Chipping Sparrow.**

5.20. In salt marshes or cat-tail swamps; clings to stalks with tail cocked; song bubbling . . . . p. 89. **Long-billed Marsh Wren.**

5.00. In wet meadows, or on ill-drained hillsides; breast streaked; sings from low perch; note *flee-sic'*; rare.
p. 168. **Henslow's Sparrow.**

5.00. In orchards or about buildings; tail often cocked over back.
p. 93. **House Wren.**

4.00. In marshy meadows; clings to stalks with tail cocked; song not bubbling . . . . . p. 90. **Short-billed Marsh Wren.**

B'.

6.00. In salt marshes; not found north of Long Island Sound.
p. 165. **Seaside Sparrow.**

5.50. (Very rare in southern Connecticut; not uncommon in the lower Hudson Valley.) Skulks in bushes; whistles loudly; conspicuous whitish line over eye. . . . . p. 94. **Carolina Wren.**

B″.

5.35. In trees, chiefly spruces; crown brownish-gray.
p. 83. **Hudsonian Chickadee.**

Gray or Grayish.

A′.

10.00. Breast reddish; in trees or on ground . . . . p. 73. **Robin.**
10.00. Lengthwise on limbs, or on exposed stones; bar across wing white; wings long; flight swallow-like . . . p. 212. **Nighthawk.**
8.94. Dark slaty-gray; in bushes, or feeding on ground . p. 95. **Catbird.**
6.99. About farm buildings or near water; flies out into the air after insects; tail constantly jerked . . . . . p. 206. **Phœbe.**
6.53. (After May 15.) In groves or street trees; wing-bars white; flies out into the air after insects; song *pee-ee-wee.*
p. 205. **Wood Pewee.**

[6.33. **Size of English Sparrow.**]

B.

6.23. In trees; breast whitish, unstreaked . p. 136. **Red-eyed Vireo.**
6.22. In trees or occasionally on ground; brownish-gray, streaked; often with rose-colored males . . . . p. 181. ♀ **Purple Finch.**
6.19.* In flocks, often with red males; note when flying *kip, kip.*
p. 180. ♀ **Red Crossbill.**
6.05.** In flocks, in trees or on ground, sometimes with red males; wing-bars white . . . . . p. 179. ♀ **White-winged Crossbill.**
6.09. (Rare late in May.) In alder thickets; note *quee-quee′.*
p. 202. **Alder Flycatcher.**
5.41. In trees in open country; note emphatic *tse-bic′*; flies out into the air after insects; sits upright on a perch.
p. 202. **Least Flycatcher.**
6.04. On ground near water; tail constantly wagged.
p. 108. **Water-thrush.**
5.80. In trees; common in village streets; song warbling.
p. 134. **Warbling Vireo.**
5.61. (Generally only till May 10.) In trees; head dark; notes rich and sweet . . . . . p. 132. **Solitary Vireo.**
5.56. (After May 15.) Restless in trees; sides streaked with black.
p. 115. ♀ **Black-poll Warbler.**
5.28. (After May 15.) In trees; generally with other small birds; spot on wing white . p. 121. ♀ **Black-throated Blue Warbler.**
5.27. (Rare north of Connecticut.) In thickets; under parts yellowish; note loud, emphatic . . . . . p. 131. **White-eyed Vireo.**
5.00. (Rare, except in northern New York and New England.) In trees; under parts streaked; bars on wing yellow.
p. 176. **Pine Siskin.**
4.41. (May 1–10.) Restless in trees and thickets; eye prominent; song loud and musical . . . . p. 80. **Ruby-crowned Kinglet.**

B′.

6.28. Near water; under parts streaked with black; tail constantly wagged.
p. 107. **Louisiana Water-thrush.**

6.00. (As far north as Orange, N. J., and Staten Island.) In trees; upper parts gray; crest conspicuous . . p. 85. **Tufted Titmouse.**

5.75. (As far north as Sing Sing, N. Y.; absent in New England.) Sits upright on a perch, or flies out for insects.
p. 203. **Green-crested Flycatcher.**

5.51. Back greenish-gray; head striped with black and buff.
p. 128. **Worm-eating Warbler.**

B″.

6.27. Head and upper breast slaty-gray; outer tail-feathers white.
p. 158. **Junco.**

6.19. In trees; generally conifers; often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill.**

6.05. In trees; generally in conifers, at high altitudes; wing-bars white; rump greenish-yellow . p. 179. ♀ **White-winged Crossbill.**

4.07. Active in trees, generally conifers; top of head yellow or orange, inclosed in black; note *tsee-tsee-tsee.*
p. 81. **Golden-crowned Kinglet.**

Yellow or Orange, without Black.

A.

10.75. Breast yellow; back brown; in meadows. p. 190. **Meadowlark.**

[10.00. **Size of Robin.**]

9.01. Belly yellow; throat and breast ashy; note loud.
p. 207. **Crested Flycatcher.**

7.44. (Rare north of Connecticut.) In thickets and clearings; upper parts greenish; throat and breast bright yellow; very noisy.
p. 102. **Yellow-breasted Chat.**

7.53. In trees; under parts and middle of back dull orange; wing-bars white . . . . . p. 188. ♀ **Baltimore Oriole.**

7.32. (Rare north of Connecticut.) Under parts dull yellow; upper parts grayish-green. . . . . p. 189. ♀ **Orchard Oriole.**

7.25. In trees; under parts greenish-yellow; upper parts olive-green.
p. 147. ♀ **Tanager.**

[6.33. **Size of English Sparrow.**]

B.

6.17. Crown dull orange; back brownish; breast spotted.
p. 108. **Oven-bird.**

5.95. Throat bright yellow; in trees; not restless; song loud and rich.
p. 133. **Yellow-throated Vireo.**

5.65. Rump yellow; back brownish; restless in trees.
p. 120. ♀ **Myrtle Warbler.**

5.61. (Arrives May 10.) Low in woodland; under parts yellow.
p. 100. ♀ **Canadian Warbler.**

5.52. Generally in pines; throat bright yellow; song rippling.
p. 111. **Pine Warbler.**

5.43. (May 1–10.) Under parts bright yellow; crown reddish-brown; tail frequently wagged . . . . p. 110. **Yellow Palm Warbler.**

5.41. Restless in trees and thickets; sides of breast, wing, and band across tail yellow . . . . . p. 99. ♀ **Redstart.**

5.33. In bushes in wet places; yellow brightest on throat; back brownish p. 103. ♀ **Northern Yellow-throat.**

5.27. (Rare north of Connecticut.) Sides washed with yellowish; eye ring and line to forehead yellow; note loud and emphatic. p. 131. **White-eyed Vireo.**

5.25. Throat dull yellow; back black, streaked with whitish; wing-patch white; rare . . . . . p. 114. ♀ **Blackburnian Warbler.**

5.14. In open woodland and roadside thickets; top of head yellow; cheeks and under parts white; narrow stripe along sides reddish-brown. p. 117. **Chestnut-sided Warbler.**

5.10. In flocks, with bright yellow and black males; throat yellowish; back brownish . . . . . p. 177. ♀ **Goldfinch.**

5.10. Yellow all over; greenish-yellow on back; clear yellow or orange-yellow below . . . . . p. 122. **Yellow Warbler.**

5.00. Under parts and forehead yellow; very restless in trees; near water. p. 101. ♀ **Wilson's Warbler.**

5.00. (Rare, except in northern New York and New England.) Wing-bars yellow; entire plumage streaked . p. 176. **Pine Siskin.**

4.77. Under parts bright yellow; head ashy; very restless, in scrubby growth . . . . . p. 126. **Nashville Warbler.**

Yellow, Orange, or Chestnut, with Black.

[10.00. **Size of Robin.**]

A.

7.53. In trees; head black; breast and belly reddish-orange; wings black, with white wing-bars; tail black and yellow. p. 188. **Baltimore Oriole.**

7.32. (Rare north of Connecticut.) In trees; head black; breast and belly chestnut; no yellow in tail . . . p. 189. **Orchard Oriole.**

[6.33. **Size of English Sparrow.**]

B.

5.65. In trees, often flying out for an insect; rump yellow; patch on each side of breast yellow; throat white. p. 120. **Myrtle Warbler.**

5.63. (Very rare late in May.) Belly yellow; head and throat bluish-gray; breast black; haunts dry banks. p. 105. **Mourning Warbler.**

5.61. Low in wet places; under parts yellow; necklace of spots across breast black . . . . . p. 100. **Canadian Warbler.**

5.41. Restless in trees or thickets; head lustrous black; orange or yellow on sides of breast, wing, and tail; latter constantly spread. p. 99. **Redstart.**

5.33. In bushes in wet places; throat yellow; broad band through eye black; song *witchery, witchery,* or *wee-see'-sir, wee-see'-sir.* p. 103. **Northern Yellow-throat.**

5.25. (Rare in eastern New England.) In trees, often conifers; throat rich orange; head and back black, with white markings.
p. 114. **Blackburnian Warbler.**

5.12. (May 10–25.) In trees, often conifers; under parts bright yellow, streaked with deep black; head bluish-ash; rump yellow; back black with white on wings and tail.
p. 118. **Magnolia Warbler.**

5.10. In trees, especially pines; throat and sides of breast black; cheeks yellow; song hoarse but musical.
p. 113. **Black-throated Green Warbler.**

5.10. In scrubby pastures and edges of woodland; throat black; top of head and band on wing yellow; song *zēē zee-zee-zee.*
p. 127. **Golden-winged Warbler.**

5.10. In flocks; back and under parts bright yellow; forehead black; wings and tail black and white; notes sweet.
p. 177. **Goldfinch.**

5.00. In trees in wet places; under parts yellow; cap black; rare.
p. 101. **Wilson's Warbler.**

5.00. In trees: under parts yellow, streaked with black; crown black; very rare . . . . . p. 123. **Cape May Warbler.**

4.75. In dry, scrubby woodland; under parts bright yellow; sides streaked with black . . . . . p. 109. **Prairie Warbler.**

B'.

5.67. In wet woods and in laurel; back of head and throat black; forehead and cheeks yellow . . . . p. 102. **Hooded Warbler.**

5.40. In wet woods; line over eye yellow; sides of throat black.
p. 106. **Kentucky Warbler.**

4.80. In dry, scrubby growth; top of head and under parts yellow; line through eye black; wing-bars white.
p. 127. **Blue-winged Warbler.**

Black and White.

A.

[10.00. **Size of Robin.**]

9.40. On trunks or large limbs; under parts white; wings barred with black and white; stripe of white down middle of back.
p. 224. **Hairy Woodpecker.**

8.51. Flying from exposed perch; under parts white; head black; tail black, tipped with white . . . . . p. 208. **Kingbird.**

8.35. Scratching in thickets, or singing from bush or low tree; head black; sides chestnut; tail-feathers tipped with white.
p. 152. **Towhee.**

8.12. In trees; head and back black; wings and tail black and white; breast white, with a spot of rose in centre.
p. 150. **Rose-breasted Grosbeak.**

7.25. In or near grassy fields; under parts black; upper parts chiefly dull white . . . . . p. 193. **Bobolink.**

6.83. On trunks or large limbs; under parts white; wings barred black and white; stripe of white down middle of back.
p. 223. **Downy Woodpecker.**

B.

[6.33. Size of English Sparrow.]

6.07. On limbs or trunks; crown black; under parts white; back bluish-gray . . . . . p. 86. **White-bellied Nuthatch.**

5.56. (May 15-30.) Restless in trees, not on the large limbs; crown plain black; back and breast streaked. p. 115. **Black-poll Warbler.**

5.30. On trunks and large limbs of trees; head black, with white line through centre . . . p. 129. **Black and White Warbler.**

5.28. In trees; throat and sides black; upper parts dark bluish; spot on wing white . . . . p. 121. **Black-throated Blue Warbler.**

5.27. In trees; top of head and throat black; cheeks white; wings gray. p. 84. **Chickadee.**

4.62.* On limbs and trunks; head and line through eye black; back bluish; under parts reddish-brown or buffy. p. 85. **Red-bellied Nuthatch.**

A″.

12.00. In woods; often about logging-camps; forehead white; nape black. p. 197. **Canada Jay.**

9.00. On tops of trees or bushes; wings and tail black and white. p. 137. **Loggerhead Shrike.**

8.75. On trunks and large limbs; back barred with black and white. p. 221. **American Three-toed Woodpecker.**

8.56. On trunks or large limbs; back speckled with black and white; white stripe along edge of wing . . . . . p. 220. **Sapsucker.**

Black.

A.

19.30. Entire plumage black . . . . . p. 196. **Crow.**

13.50–12.00. In pines or walking on ground; tail long; head lustrous blue-black . . . . . p. 184. **Crow Blackbird.**

[10.00. Size of Robin.]

9.55. (May 1–10.) Near water; no red or white on wing; eye white. p. 186. **Rusty Blackbird.**

9.51. Near water; red on shoulders, or white bar on upper wing. p. 191. **Red-winged Blackbird.**

7.92. On ground in fields, or flying over, or lighting in trees; head dark brown . . . . . p. 192. **Cowbird.**

A′.

8.50. (Only near New York city or Long Island Sound.) Purplish or greenish at close range; feathers of upper parts tipped with buff; bill yellow . . . . . p. 195. **Starling.**

A″.

17.00. In woods; head with long red crest. p. 219. **Pileated Woodpecker.**

9.50. On trunks or large limbs of trees; back plain black; crown in male with yellow patch. p. 222. **Arctic Three-toed Woodpecker.**

Red, Scarlet, or Rose.

A.

8.35. On ground near bushes, or singing in trees; head and upper breast black; belly white; tail black and white; sides of breast and belly chestnut . . . . . p. 152. **Towhee.**

8.12. In trees; spot of rose on breast; head black; wings and tail black and white . . . . . p. 150. **Rose-breasted Grosbeak.**

7.25. In trees; whole body red; wings and tail black.
p. 147. **Scarlet Tanager.**

A′.

8.25. (As far north as Central Park, N. Y.) Entire plumage red or reddish; crest conspicuous . . . . . p. 151. **Cardinal.**

A″.

8.56. On large limbs and trunks; top of head and in male throat dark red; back speckled with white; edge of black wing white.
p. 220. **Yellow-bellied Sapsucker.**

[6.33. **Size of English Sparrow.**]

B.

6.22. Entire upper parts and throat crimson, brightest on head and rump.
p. 181. **Purple Finch.**

6.19.* Entire bird vermilion-red; regular in northern New England.
p. 180. **American Crossbill.**

6.05.** Entire bird rose-red; wing-bars white; not so uncommon in northern New England . p. 179. **White-winged Crossbill.**

5.63 In trees; crown, throat, upper breast, and sides bay; wing-bars white . . . . . p. 116. **Bay-breasted Warbler.**

5.25. (Rare in eastern New England.) In trees, often evergreen; throat rich orange; back black, streaked with whitish; patch on wing white . . . . . p. 114. **Blackburnian Warbler.**

Blue.

A.

13.02. Perched near water, or flying over it; much white showing in wings and tail; bill long and pointed . . . . p. 224. **Kingfisher.**

11.74. In woodland, or in trees near houses; much white in wings and tail; band across breast black; crest often raised p. 198. **Blue Jay.**

[10.00. **Size of Robin.**]

7.01. Upper parts deep blue; breast reddish-brown p. 71. **Bluebird.**

7.01. Upper parts grayish; breast pale reddish; wings and tail bluish.
p. 71. ♀ **Bluebird.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On limbs and trunks of trees; back bluish-gray; top of head black; under parts white . . . . p. 86. **White-bellied Nuthatch.**

5.59. Sings from a high perch, near bushes; entire body deep blue. p. 149. **Indigo-bird.**

5.28. (Arrives May 10.) In trees; throat black; upper parts dark blue; spot on wing white. p. 121. **Black-throated Blue Warbler.**

4.73. In trees; head and black bluish-gray; throat yellowish with brown spot . . . . . p. 124. **Parula Warbler.**

B″.

4.62. On limbs and trunks of trees; under parts reddish-brown; black line through eye . . . . p. 85. **Red-bellied Nuthatch.**

KEY FOR SUMMER

(JUNE, JULY, AUGUST)

Brown or Brownish.

A.

12.20. } In trees; very slender; tail long; **Yellow-billed** } **Cuckoo.**
11.83. } under parts white . . p. 226. **Black-billed** }

12.00. Flies from or to trees; rump white . . . . . p. 216. **Flicker.**

11.42. Upper parts reddish-brown; tail very long; flies into bushes when disturbed . . . . . p. 95. **Thrasher.**

10.75. Whistles in tree-tops, or from posts; feeds in grass; outer tail-feathers white . . . . . p. 190. **Meadowlark.**

10.00. Breast bay . . . . . p. 73. **Robin.**

9.75. Flutters from ground in woods as if bewildered; band across upper breast white or buff . . . . . p. 213. **Whip-poor-will.**

9.01. In trees; notes loud and harsh; belly yellow; tail reddish-brown. p. 207. **Crested Flycatcher.**

8.35. On ground under bushes; tail-feathers tipped with white; flanks reddish-brown . . . . . p. 152. ♀ **Towhee.**

8.29. On ground in woods, or on low limbs; breast white, heavily spotted; head reddish-brown . . . . . p. 79. **Wood Thrush.**

8.12. In trees; breast lightly streaked; line over eye and bar on wing white; no red on breast` p. 150. ♀ **Rose-breasted Grosbeak.**

8.00. In bushes near water; blackish-brown; streaked. p. 191. ♀ **Red-winged Blackbird.**

7.75. (Very rare in southern and eastern New England.) Walks or runs on the ground in grassy fields; throat tinged with yellow; stripe through eye, sides of throat, and patch on breast black. p. 199. **Prairie Horned Lark.**

7.52. In wet woods; upper parts tawny-brown; breast not spotted with black . . . . . p. 78. **Wilson's Thrush.**

7.25. Walking on ground in fields, or lighting in trees; unstreaked. p. 192. ♀ **Cowbird.**

7.19. In trees; head and neck snuff-brown; line through eye velvety-black; crest often raised; tail-feathers tipped with yellow. p. 139. **Cedar-bird.**

7.17. (Rare in eastern and southern New England after May 10.) Breast spotted with black; tail reddish-brown. p. 74. **Hermit Thrush.**

7.12. In grass-fields; under parts yellowish-brown; unstreaked. p. 193. ♀ **Bobolink.**

6.99. About farm buildings, or near water; tail constantly jerked; breast unstreaked; flies out from perch for insects . p. 206. **Phœbe.**

A″

12.00. In woods and about camps. Entire plumage sooty brown. p. 197. *Im.* **Canada Jay.**

7.17. Breast white, spotted with black; eye-ring white; cheek buffy. p. 76. **Olive-backed Thrush.**

7.17. On ground, or low limbs; breast spotted with black; tail reddish-brown . . . . . p. 74. **Hermit Thrush.**

7.00. (On mountains above 3000 ft.) On ground, or on low limbs; breast white, spotted with black . . . p. 77. **Bicknell's Thrush.**

6.74. On ground, or in bushes; head marked with black and white; line over eye yellow; throat white. p. 163. **White-throated Sparrow.**

[6.33. Size of English Sparrow.]

B.

6.30. Wherever there are bushes and water; breast streaked, with dark blotch in centre . . . . . p. 157. **Song Sparrow.**

6.23. In trees; entire under parts grayish-white, unstreaked. p. 136. **Red-eyed Vireo.**

6.17. In dry woods, on ground or low limbs; teeters as it walks; breast streaked with black . . . . . p. 108. **Oven-bird.**

6.12. In pastures and near cultivated fields; breast streaked. p. 172. **Vesper Sparrow.**

5.89. In marshes; breast dark, unstreaked; cap chestnut. p. 155. **Swamp Sparrow.**

5.85. In salt marshes . . . . . p. 167. **Sharp-tailed Sparrow.**

5.80. In trees; common in village streets; entire under parts white, unstreaked . . . . . p. 134. **Warbling Vireo.**

5.68. In grass land; breast streaked . . p. 170. **Savanna Sparrow.**

5.68. In bushy pastures and hillsides; often in cedars; breast unstreaked; song musical . . . . . p. 160. **Field Sparrow.**

5.59. In bushes or small trees; unstreaked; tail nervously twitched to the side . . . . . p. 149. ♂ **Indigo-bird.**

5.52. In pines; upper parts brownish; under parts dull whitish; wing-bars dull white . . . . . p. 111. ♀ **Pine Warbler.**

5.38. (Not common north of latitude of Boston.) In dry, sterile fields; song insect-like; breast unstreaked p. 169. **Grasshopper Sparrow.**

5.37. Near houses or farming land, or in cedars; breast ashy white, unstreaked; song unmusical . . p. 161. **Chipping Sparrow.**

5.20. In marshes; clings to stalks with tail cocked; song bubbling. p. 89. **Long-billed Marsh Wren.**

5.00. In wet meadows, or ill-drained hillsides; breast narrowly streaked; note *flee'-sic*; rare . . . . . p. 168. **Henslow's Sparrow.**

5.00. In orchards, or about buildings; tail often cocked over back. p. 93. **House Wren.**

4.00. In wet meadows; clings to stalks with tail cocked. p. 90. **Short-billed Marsh Wren.**

B'.

6.00. (Not found north of Rhode Island.) In salt marshes.
p. 165. **Seaside Sparrow.**

5.50. (Rare in southern Connecticut, not uncommon in the lower Hudson Valley.) Skulks in bushes; whistles loudly; conspicuous whitish line over eye . . . . . p. 94. **Carolina Wren.**

B''.

6.27. On ground, or in trees; brownish-gray; outer tail-feathers white.
p. 158. ♀ **Junco.**

5.66. Clinging close to trunks of trees . . p. 88. **Brown Creeper.**

5.35. (Only on mountains above 3000 ft. except in northern Maine.) In trees, chiefly spruces; crown brownish-gray.
p. 83. **Hudsonian Chickadee.**

4.06. Dark brown; generally on ground; in damp forests.
p. 91. **Winter Wren.**

Gray or Grayish.

A.

10.00. Breast reddish; in trees, or on ground . . . . p. 73. **Robin.**

10.00. Lengthwise on limbs, or on exposed rocks; bar across wing white; wings very long . . . . . p. 212. **Nighthawk.**

8.94. Dark slaty-gray; top of head black; in bushes, or feeding on ground . . . . . p. 95. **Catbird.**

6.99. About farm-buildings, or near water; flies out from perch for insects; tail constantly jerked . . . . . p. 206. **Phœbe.**

6.53. In groves, or street trees; flies out from perch for insects; wing-bars white . . . . . p. 205. **Wood Pewee.**

A''.

12.00. In woods, often about camps; forehead white; nape black.
p. 197. **Canada Jay.**

12.00. Entire plumage sooty slate . . . p. 197. *Im.* **Canada Jay.**

9.08. Slaty-gray; wing-bars white . . . p. 183. ♀ **Pine Grosbeak.**

9.00. On tops of trees or bushes; wings and tail black and white.
p. 137. **Loggerhead Shrike.**

7.39. On dead trees in clearings or burnt tracts; flies out from perch after insects; note a wild whistle. p. 206. **Olive-sided Flycatcher.**

[6.33. **Size of English Sparrow.**]

B.

6.23. In trees; breast white, unstreaked . . p. 136. **Red-eyed Vireo.**

6.22. In trees, or occasionally on ground; brownish-gray; streaked all over; line over eye white . . . . p. 181. ♀ **Purple Finch.**

5.80. In trees, common in village streets; breast unstreaked.
p. 134. **Warbling Vireo.**

5.61. (Rare south of latitude 43.) In cool woods; head dark; breast unstreaked; line to and around eye white.
p. 132. **Solitary Vireo.**

5.41. In trees in open country; note an emphatic *tse-bic'*; sits upright on perch or flies out after insects.
p. 202. **Least Flycatcher.**

5.28. (Rare south of latitude 43, except in western New England.) Low in woods; spot on wing white.
p. 121. ♀ **Black-throated Blue Warbler.**

5.27. (Rare north of Connecticut.) In thickets; under parts yellowish; note loud and emphatic . . . . p. 131. **White-eyed Vireo.**

B'.

6.28. Near water; under parts streaked with black; tail constantly wagged.
p. 107. **Louisiana Water-thrush.**

6.00. (As far north as Orange, N. J., and Staten Island.) In trees; upper parts gray; crest conspicuous . . p. 85. **Tufted Titmouse.**

5.75. (As far north as Sing Sing, N. Y.; absent in New England.) Sits upright on a perch, or flies out for insects.
p. 203. **Green-crested Flycatcher.**

5.51. Back greenish-gray; head striped with black and buff.
p. 128. **Worm-eating Warbler.**

B''.

6.27. Head and upper breast slaty-gray; outer tail-feathers white.
p. 158. **Junco.**

6.19. In trees, generally conifers, often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill.**

6.09. In alder thickets; sits upright on a perch; note *quee-quee'*.
p. 202. **Alder Flycatcher.**

6.05. In trees, generally conifers, at high altitudes; wing-bars white; rump greenish-yellow . p. 179. ♀ **White-winged Crossbill.**

6.04. On ground near water; tail constantly wagged; breast streaked with black . . . . . p. 108. **Water-thrush.**

5.63. Entire under parts yellowish; in spruces; note *pee-a*.
p. 204. **Yellow-bellied Flycatcher.**

5.56. Active in trees, generally conifers; sides streaked with black.
p. 115. ♀ **Black-poll Warbler.**

5.28. In trees or underbrush; under parts unstreaked; small spot on wing white . . . . p. 121. ♀ **Black-throated Blue Warbler.**

4.07. Active in trees, generally conifers; top of head yellow or orange, inclosed in black; note *tsee-tsee-tsee*, thin and high.
p. 81. **Golden-crowned Kinglet.**

Yellow or Orange without Black.

A.

10.75. Breast yellow with black crescent; back brown; in grassland.
p. 190. **Meadowlark.**

[10.00. Size of Robin.]

9.01. Belly yellow; throat and breast ashy; tail reddish-brown.
p. 207. **Crested Flycatcher.**

7.53. In trees; under parts and middle of back dull orange; wing-bars white . . . . . p. 188. ♀ **Baltimore Oriole.**

7.32. (Rare north of Connecticut.) Under parts dull yellow; upper parts grayish-brown . . . . . p. 189. ♀ **Orchard Oriole.**

7.25. In trees; under parts greenish-yellow; upper parts olive-green. p. 147. ♀ **Tanager.**

[6.33. **Size of English Sparrow.**]

B.

6.17. In woodland; crown dull orange; breast spotted. p. 108. **Oven-bird.**

5.95. Throat and breast bright yellow; in all but evergreen trees; not restless; song loud and rich; wing-bars white. p. 133. **Yellow-throated Vireo.**

5.52. Generally in pines; yellow brightest on throat; wing-bars dull white; song rippling . . . . . p. 111. **Pine Warbler.**

5.41. Restless in trees and thickets; sides of breast, wing, and band across tail yellow . . . . . p. 99. ♀ **Redstart.**

5.33. In bushes in wet places; yellow brightest on throat; back brownish . . . . . p. 103. ♀ **Northern Yellow-throat.**

5.27. (Rare north of Connecticut.) Sides washed with yellowish; eye-ring and line to forehead yellow; notes loud and emphatic. p. 131. **White-eyed Vireo.**

5.25. (Rare south of latitude 43.) In evergreens; throat dull orange; wing-bar white . . . . . p. 114. ♀ **Blackburnian Warbler.**

5.14. In open woodland, and roadside thickets; top of head yellow; under parts white; cheeks white; narrow stripe along flanks reddish-brown . . . . . p. 117. **Chestnut-sided Warbler.**

5.10. Often with bright yellow and black males; throat yellowish; back brownish; wings and tail black and white. p. 177. ♀ **Goldfinch.**

5.10. Yellow all over, brighter below; back greenish-yellow. p. 122. **Yellow Warbler.**

4.77. Under parts bright yellow; head ashy; very restless in scrubby growth . . . . . p. 126. **Nashville Warbler.**

B″.

5.65. In trees, generally conifers; rump yellow; back brownish. p. 120. ♀ **Myrtle Warbler.**

5.61. Low in woodland; under parts yellow. p. 100. ♀ **Canadian Warbler.**

5.25. In trees, generally conifers; throat dull yellow; back black, streaked with white; wing-patch white. p. 114. ♀ **Blackburnian Warbler.**

5.00. Wing-bar yellow; under parts streaked . p. 176. **Pine Siskin.**

Yellow, Orange or Chestnut, with Black.

A.

8.35. Scratching under bushes, or flying through them, or singing from bush or low tree; head black; tail black, tipped with white; sides bay . . . . . p. 152. **Towhee.**

7.58. In trees; head black; breast and belly reddish-orange; wings black, with white wing-bars; tail black and yellow.
p. 188. **Baltimore Oriole.**

7.32. (Rare north of Connecticut.) In trees; head black; breast and belly chestnut; no yellow in tail . . . p. 189. **Orchard Oriole.**

[6.33. **Size of English Sparrow.**]

B.

5.41. Restless in trees or thickets; head black; orange or yellow on sides of breast, wing, and tail . . . . . p. 99. **Redstart.**

5.33. Low in thickets, generally in wet places; throat and breast yellow; broad band through eye black.
p. 103. **Northern Yellow-throat.**

5.10. In trees, especially evergreens; throat and sides of breast black; cheeks yellow; song wheezy; common.
p. 113. **Black-throated Green Warbler.**

5.10. In scrubby pastures, or edges of woodland; throat black; top of head and band on wing yellow; rare.
p. 127. **Golden-winged Warbler.**

5.10. On the ground, in trees, or flying; back and under parts bright yellow; forehead black; wings and tail black and white.
p. 177. **Goldfinch.**

4.75. In second growth; under parts bright yellow; sides streaked with black . . . . . p. 109. **Prairie Warbler.**

B'.

5.67. In wet woods and in laurel; back of head and throat black; forehead and cheeks yellow . . . . . p. 102. **Hooded Warbler.**

5.40. In wet woods; line over eye yellow; sides of throat black.
p. 106. **Kentucky Warbler.**

4.80. Top of head and under parts yellow; line through eye black; wing-bars white or yellowish-white.
p. 127. **Blue-winged Warbler.**

B''.

5.65. In trees; rump, crown-patch and patches on sides of breast yellow; patches on sides of upper belly black.
p. 120. **Myrtle Warbler.**

5.63. In thickets, chiefly near the ground; head and throat bluish-gray; breast black; belly yellow . . p. 105. **Mourning Warbler.**

5.63. In trees, generally conifers; forehead and cheeks black; crown chestnut; throat, upper breast, and sides bay.
p. 116. **Bay-breasted Warbler.**

5.61. In wet thickets or mountain-sides; under parts yellow; necklace of spots across breast black . . . p. 100. **Canadian Warbler.**

5.25. In trees, generally evergreens; throat orange; head and back black, streaked with whitish . . p. 114. **Blackburnian Warbler.**

5.12. In trees, generally conifers; under parts bright yellow, streaked with black; head bluish-ash; back and wings black and white; rump yellow . . . . . p. 118. **Magnolia Warbler.**

5.00. In trees; under parts yellow, streaked with black; crown black.
p. 123. **Cape May Warbler.**

Black and White.

[10.00. **Size of Robin.**]

A.

9.40. On trunks or large limbs; under parts and broad stripe down back white; wings barred, black and white; ♂ with red patch on head; rare except near deep woods . p. 224. **Hairy Woodpecker.**

8.51. Flying from exposed perch; under parts white; head black; tail black, tipped with white . . . . . p. 208. **Kingbird.**

8.35. Scratching in thickets, or singing from bush or low tree; head black; sides chestnut; tail-feathers tipped with white.
p. 152. **Towhee.**

8.12. In trees, or in potato-fields; head and back black; wings and tail black and white; breast white with a spot of rose in centre.
p. 150. **Rose-breasted Grosbeak.**

7.25. In or near grassy fields; under parts black; upper parts chiefly white . . . . . p. 193. **Bobolink.**

6.83. On trunks or large limbs; under parts and broad stripe down back white; wings barred, black and white; ♂ with red patch on head.
p. 223. **Downy Woodpecker.**

A″.

12.00. In woods, often about logging-camps, forehead white; nape black.
p. 197. **Canada Jay.**

9.00. On tops of trees or bushes; wings and tail black and white.
p. 137. **Loggerhead Shrike.**

8.75. On trunks and large limbs; back barred with black and white.
p. 221. **American Three-toed Woodpecker.**

8.56. On trunks and large limbs; back speckled with black and white; white stripe along edge of wing . . . . p. 220. **Sapsucker.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On limbs or trunks; crown black; under parts white; back bluish-gray . . . . . p. 86. **White-bellied Nuthatch.**

5.30. On trunks and large limbs of trees; head black, with white line through centre; back streaked black and white.
p. 129. **Black and White Warbler.**

5.28. (Only from northern and western Massachusetts northward.) In woods; throat black; upper parts dark bluish; spot on wing white . . . . . p. 121. **Black-throated Blue Warbler.**

5.27. In trees; top of head and throat black; cheeks white; wings gray.
p. 84. **Chickadee.**

B″.

5.56. Active in trees, generally conifers, chiefly at high altitudes; crown plain black; back and breast streaked.
p. 115. **Black-poll Warbler.**

5.28. In trees or underbrush; throat and sides black; upper parts dark-bluish; spot on wing white.
p. 121. **Black-throated Blue Warbler.**

4.62. On trunks and limbs; top of head and line through eye black; back bluish; under parts reddish-brown or buffy.
p. 85. **Red-bellied Nuthatch.**

Black.

A.

19.30. Entire plumage black . . . . . p. 196. **Crow.**

13.50–12.00. In pines, or walking on ground; tail long; head lustrous blue-black . . . . . p. 184. **Crow Blackbird.**

[10.00. **Size of Robin.**]

9.51. Near water; red on shoulders, or white bar on upper wing.
p. 191. **Red-winged Blackbird.**

7.92. Walking on ground, or lighting in trees; head deep brown.
p. 192. **Cowbird.**

A′.

8.50. Only near New York city, or Long Island Sound; purplish or greenish at close range; feathers of upper parts tipped with buff; bill yellow . . . . . p. 195. **Starling.**

A″.

17.00. In woods; head with long red crest.
p. 219. **Pileated Woodpecker.**

9.50. On trunks or large limbs; back plain black; wings and tail black and white . . . p. 222. **Arctic Three-toed Woodpecker.**

Red, Scarlet, or Rose.

A.

8.12. In trees; spot of rose-red on white breast; head and throat black; wings and tail black and white.
p. 150. **Rose-breasted Grosbeak.**

7.25. In trees; whole body red; wings and tail black.
p. 147. **Scarlet Tanager.**

A′.

8.25. (As far north as Central Park, N. Y.) Entire plumage red or reddish; crest conspicuous . . . . . p. 151. **Cardinal.**

A″.

9.08. Entire plumage rose-red; wing-bars white
p. 183. **Pine Grosbeak.**

8.56. On trunks or large limbs; back speckled with white; whole top of head, and in male throat also, dark red . p. 220. **Sapsucker.**

[6.33. **Size of English Sparrow.**]

B.

6.22. Entire upper parts and throat dull crimson; brightest on head and rump; bill stout . . . . . p. 181. **Purple Finch.**

5.25. (Rare south of latitude 43.) In trees, chiefly evergreens; throat rich orange; back black, streaked with white.
p. 114. **Blackburnian Warbler.**

B″.

6.19. Entire plumage vermilion-red, brightest on head and rump.
p. 180. **American Crossbill.**

6.05. Entire bird rose-red; wing-bars white.
p. 177. **White-winged Crossbill.**

5.63. In trees, generally evergreen; crown, throat, upper breast, and sides bay; wing-bars white . . . p. 116. **Bay-breasted Warbler.**

5.25. In trees, generally evergreen; throat rich orange; back black, streaked with whitish; patch on wing white.
p. 114. **Blackburnian Warbler.**

4.62. On limbs or trunks of trees; top of head and line through eye black; back bluish; under parts reddish-brown.
p. 85. **Red-bellied Nuthatch.**

Blue.

A.

13.02. Perched near water, or flying over it; much white and no black showing on wings, tail, and throat; bill long and pointed; head crested . . . . . p. 224. **Kingfisher.**

11.74. In trees; much white showing in wings and tail, and black on head and breast; bill not long; head crested
p. 198. **Blue Jay.**

[10.00. **Size of Robin.**]

7.01. Upper parts deep blue; breast reddish . . . p. 71. **Bluebird.**

7.01. Upper parts grayish; breast pale reddish; wings and tail bluish.
p. 71. ♀ **Bluebird.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On limbs and trunks of trees; back bluish-gray; top of head black; under parts white . . . p. 86. **White-bellied Nuthatch.**

5.59. Deep blue all over; sings from a high perch.
p. 149. **Indigo-bird.**

BIRDS CONSTANTLY ON THE WING (SWALLOWS, SWIFT, ETC.)

A.

10.00. Wings long and narrow, a white bar on the under side; birds generally high in air . . . . . p. 212. **Nighthawk.**

8.00. Wings rather broad; birds very dark, or females light below.
p. 146. **Purple Martin.**

[6.33. **Size of English Sparrow.**]

B.

6.95. (Longer but not larger than an English Sparrow.) Glossy blue above; salmon or whitish underneath; two outer tail-feathers long and pointed . . . . . p. 144. **Barn Swallow.**

6.01. Back bluish; throat chestnut; belly whitish; rump brick red; tail almost square . . . . . p. 145. **Cliff or Eave Swallow.**

5.90. Iridescent greenish-blue above; pure white beneath; tail simply forked . . . . . p. 143. **White-bellied Swallow.**

5.43. Sooty brown, often apparently black; wings narrow and curved; flight bat-like; tail either cigar-shaped, or, when quickly spread, fan-shaped . . . . . p. 210. **Chimney Swift.**

5.20. Upper parts brown; under parts whitish; band across breast brownish; tail notched . . . . . p. 142. **Bank Swallow.**

B′.

5.75. Upper parts brown; throat and breast dusky; no distinct band across breast . . . . . p. 141. **Rough-winged Swallow.**

KEY FOR AUTUMN

(SEPTEMBER 15–NOVEMBER 15)

Brown or Brownish.

A.

12.20. In trees; very slender; tail long; **Yellow-billed**
11.83. under parts white . . . p. 226. **Black-billed** **Cuckoo.**

12.00. Flies from or to trees; rump white . . . . . p. 216. **Flicker.**

11.42. Reddish-brown; flies into bushes when disturbed; tail long.
p. 95. **Brown Thrasher.**

10.75. Flies up from the grass; outer tail-feathers white.
p. 190. **Meadowlark.**

[10.00. **Size of Robin.**]

9.55. In flocks; upper parts rusty-brown . . p. 186. **Rusty Blackbird.**

8.35. Scratches under bushes; outer tail-feathers deeply tipped with white.
p. 152. ♀ **Towhee.**

8.12. In trees; line over eye and bar on wing white.
p. 150. ♀ **Rose-breasted Grosbeak.**

7.75. On or near the beach; throat yellow . . . p. 200. **Shore Lark.**

7.26. (After October 15.) Fox color; scratches on ground; breast spotted.
p. 154. **Fox Sparrow.**

7.19. In flocks in trees; plump, sleek; eats fruit . p. 139. **Cedar-bird.**

7.17. On ground, or low limbs; tail reddish-brown.
p. 74. **Hermit Thrush.**

7.17. On ground, or low limbs; head, back, and tail uniform olive-brown; cheek buffy; eye-ring white . p. 76. **Olive-backed Thrush.**

6.25–7.58. On ground, or low limbs; head, back, and tail uniform olive-brown; cheek gray; no eye-ring.
p. 77. **Gray-cheeked Thrush.**

6.99. On trees near water; tail constantly jerked . . p. 206. **Phœbe.**

6.74. Feeds on ground, generally in flocks; head marked with black and white; line over eye yellow or yellowish; throat white or whitish.
p. 163. **White-throated Sparrow.**

6.38. In flocks on the ground in ploughed fields and on mud-flats and marshes; tail constantly wagged; outer tail-feathers white.
p. 97. **American Pipit.**

[6.33. **Size of English Sparrow.**]

B.

6.36. (After October 20.) In flocks on the ground, or in low bushes; wing-bars white; spot on unstreaked breast dusky.
p. 162. **Tree Sparrow.**

6.30. In weedy fields, or at the edges of grassy marshes; breast streaked with dark blotch in centre . . . . . p. 157. **Song Sparrow.**

6.27. Brownish-gray, unstreaked; outer tail-feathers white; generally in flocks with slate-gray males . . . . . p. 158. ♀ **Junco.**

6.25. Only in or near beach grass . . . p. 171. **Ipswich Sparrow.**

6.17. On the ground in woods; breast streaked . p. 108. **Oven-bird.**

6.12. In grassy pasture-land, or in old fields; outer tail-feathers white. p. 172. **Vesper Sparrow.**

6.12. In grassy marshes, or borders of old fields; breast streaked; line through forehead white . . . . p. 170. **Savanna Sparrow.**

5.90. A swallow with brown back and white under parts; common along the sea-shore . . . . p. 143. *Im.* **White-bellied Swallow.**

5.89. In grassy marshes, or weedy edges of old fields; breast unstreaked; wing reddish-brown . . . . . p. 155. **Swamp Sparrow.**

5.68. In bushes, near old fields; breast unstreaked; wing-bars white; bill reddish . . . . . p. 160. **Field Sparrow.**

5.66. On trunks or large limbs of trees . . p. 88. **Brown Creeper.**

5.65. In trees, or on the sea-shore in bayberry bushes; rump yellow; tips of outer tail-feathers white . . . p. 120. **Myrtle Warbler.**

5.59. In weedy corners; no reddish-brown anywhere; tail twitched sideways . . . . . p. 149. **Indigo-bird.**

5.37. Feeding on ground, in old fields or weedy corners; breast unstreaked; wing-bars dull white; bill black, or dull reddish-brown . . . . . p. 161. **Chipping Sparrow.**

5.10. Upper parts brownish; throat tinged with yellow; wings and tail dusky, with whitish markings . . . p. 177. ♀ **Goldfinch.**

5.00. In brush heaps, or stone-walls; tail often cocked over back. p. 93. **House Wren.**

4.06. In brush heaps, stone walls, or along woodland streams; call a sharp *chick;* curtsies nervously . . . . . p. 91. **Winter Wren.**

B′.

5.50. (Very rare in New England.) Skulks in bushes; conspicuous whitish line over eye . . . . . p. 91. **Carolina Wren.**

B″.

5.35. In flocks in trees; crown dark brownish-gray. p. 83. **Hudsonian Chickadee.**

Gray or Grayish.

A.

[10.00. **Size of Robin.**]

8.94. In thickets; uniform slaty-gray with a black cap. p. 95. **Catbird.**

6.99. On trees near water, or flying out after insects; tail constantly twitched. (Much commoner than the next) . p. 206. **Phœbe.**

6.53. (Only till October.) Perched in trees, or flying out after insects; wing-bars white . . . . . p. 205. **Wood Pewee.**

A″.

12.00. In woods; crown white; nape black . . p. 197. **Canada Jay.**

9.08. Slaty-gray; wing-bars white . . . p. 183. ♀ **Pine Grosbeak.**

[6.33. **Size of English Sparrow.**]

B.

6.23. In trees, often with smaller birds; breast gray, unstreaked; line over eye white, bordered above with black.
p. 136. **Red-eyed Vireo.**

6.22. In trees, often with red males; breast streaked.
p. 181. ♀ **Purple Finch.**

6.19.* In trees, generally conifers, often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill.**

6.04. (Only till October 1.) Walking on ground under trees or bushes at the edge of water; tail constantly wagged.
p. 108. **Water-thrush.**

5.80. (Rare after September 23.) In trees, often with smaller birds; breast gray, unstreaked . . . . . p. 134. **Warbling Vireo.**

5.61. In trees; breast unstreaked; head dark; ring around eye and line to bill white . . . . . p. 132. **Solitary Vireo.**

5.56. Restless in trees; under parts yellowish; faintly streaked.
p. 115. **Black-poll Warbler.**

5.27. (Rare north of Connecticut.) In thickets; breast unstreaked; sides yellowish . . . . . p. 131. **White-eyed Vireo.**

5.27. In trees in small flocks; cap and throat black.
p. 84. **Chickadee.**

5.00. In flocks in trees; uniformly streaked; bar on wing yellowish.
p. 176. **Pine Siskin.**

4.41. In trees or thickets; restless; eye prominent.
p. 80. **Ruby-crowned Kinglet.**

4.07. In trees; restless; wing-bars white; crown yellow, bordered with black . . . . . p. 81. **Golden-crowned Kinglet.**

B′.

6.00. (North as far as Orange, N. J., and Staten Island.) In trees; upper parts gray; crest conspicuous . . . p. 85. **Tufted Titmouse.**

B″.

6.19. In trees, generally in conifers, often with red males; rump greenish-yellow . . . . . p. 180. ♀ **American Crossbill.**

6.05. In trees, generally in conifers, often with red males; wing-bars white; rump greenish-yellow.
p. 179. ♀ **White-winged Crossbill.**

Yellow without Black.

A.

7.25. In trees; back greenish; under parts yellowish; wings brown or black; bill light-colored . . . . p. 147. **Scarlet Tanager.**

[6.33. **Size of English Sparrow.**]

B.

5.95. (Rare after September 23.) In trees; throat yellow; wing-bars white.
p. 133. **Yellow-throated Vireo.**

5.65. In trees, or at the sea-shore in bayberry bushes; rump yellow; tips of outer tail feathers white . . . p. 120. **Myrtle Warbler.**

5.61. Low in trees or bushes; under parts yellow; upper parts gray. p. 100. ♀ **Canadian Warbler.**

5.56. (Very common till October 15.) Restless in trees, under parts yellowish with faint streakings . . . p. 115. **Black-poll Warbler.**

5.52. In trees, generally in pines; throat yellow; wing-bars dull whitish. p. 111. **Pine Warbler.**

5.43. In low trees or bushes; under parts yellow; tail constantly wagged. p. 110. **Yellow Palm Warbler.**

5.41. (Rare after October 5.) In trees; sides of breast, bar across wing, and band across tail yellow . . . . . p. 99. ♀ **Redstart.**

5.33. Low in bushes in wet places; throat yellow. p. 103. ♀ **Northern Yellow-throat.**

5.14. (Rare after September 25.) In trees or thickets; top of head yellow; under parts white . . . p. 117. **Chestnut-sided Warbler.**

5.12. (Rare after October 10.) In trees; under parts and rump yellow; tail black, the middle third white. p. 118. **Magnolia Warbler.**

5.10. In trees, cheeks yellow; wing-bars white. p. 113. **Black-throated Green Warbler.**

5.10. In flocks; throat yellowish ; wings and tail dusky and white. p. 177. ♀ **Goldfinch.**

4.77. Restless in trees or bushes; under parts yellow; upper parts brownish (tinged with green in strong light) p. 126. **Nashville Warbler.**

4.73. In trees; throat and breast yellow; upper parts grayish-blue; wing-bars white . . . . . p. 124. **Parula Warbler.**

Yellow, Orange, or Chestnut, with Black.

A.

[10.00. **Size of Robin.**]

8.35. Scratching on the ground under bushes; head black; sides chestnut; tail black, outer feathers tipped with white. p. 152. **Towhee.**

[6.33. **Size of English Sparrow.**]

B.

5.60. Low in trees or bushes; under parts yellow; necklace of black spots across the breast . . . . . p. 100. **Canadian Warbler.**

5.41. In trees; head black; sides of breast orange; bar across wings and tail salmon . . . . . p. 99. **Redstart.**

5.33. Low in bushes in wet places; throat yellow; band across eyes black. p. 103. **Northern Yellow-throat.**

5.10. In trees; cheeks yellow; throat and sides of breast black. p. 113. **Black-throated Green Warbler.**

5.10. In flocks; body yellow; cap black; wings and tail black and white. p. 177. **Goldfinch.**

Black and White.

A.

10.32. (Only after October 25.) On trees ; upper parts gray; wings and tail black. . . . . p. 138. **Northern Shrike.**

[10.00. Size of Robin.]

9.40. On trunks or large limbs; stripe down middle of back white; wings and tail barred with black and white.
p. 224. **Hairy Woodpecker.**

8.56. On trunks or large limbs; back speckled with white; white stripe along edge of wings . . . . . p. 220. **Sapsucker.**

8.35. Scratching on the ground under bushes; head black; tail black, outer feathers tipped with large white spots . p. 152. **Towhee.**

6.88. In flocks, generally near the sea; wings and tail black and white; body chiefly white . . . . . p. 174. **Snow Bunting.**

6.83. On trunks or large limbs; stripe down middle of back white; wings and tail barred with black and white.
p. 223. **Downy Woodpecker.**

A''.

12.00. In woods; crown white; nape black . . . p. 197. **Canada Jay.**

8.75. On trunks and large limbs; back barred with black and white.
p. 221. **American Three-toed Woodpecker.**

[6.33. Size of English Sparrow.]

B.

6.07. Climbing about on the large limbs or trunks of trees; top of head black; back bluish-gray . p. 86. **White-bellied Nuthatch.**

5.30. (Rare after October 1.) Climbing about the trunks or large limbs of trees; streaked black and white.
p. 129. **Black and White Warbler.**

5.28. (Rare after October 10.) In trees; head and throat black; under parts white; white spot on wing.
p. 121. **Black-throated Blue Warbler.**

5.27. In small flocks in trees; cap and throat black; cheeks and breast white . . . . . p. 84. **Chickadee.**

Black.

A.

12–13.50. In flocks; tail long . . . . . p. 184. **Crow Blackbird.**

[10.00. Size of Robin.]

9.55. In flocks near water . . . . . p. 186. **Rusty Blackbird.**

9.51. In flocks, with red or white at the bend of the wing.
p. 191. **Red-winged Blackbird.**

7.92. In flocks; head brown; body black . . . p. 192. **Cowbird.**

A'.

8.50. (Only near New York city or Long Island Sound.) Walks on ground; purplish or greenish at close range; feathers of upper part tipped with buff . . . . . p. 195. **Starling.**

A''.

17.00. Entire plumage black, except a red crest and a white bar on wing.
p. 219. **Pileated Woodpecker.**

9.50. On trunks or large limbs; back black; wings and tail black and white . . . . p. 222. **Arctic Three-toed Woodpecker.**

Red, Scarlet, or Rose.

A.

[10.00. **Size of Robin.**]

9.40. On trunks or large limbs; stripe down middle of back white; wings and tail barred with black and white; red patch on back of head. p. 224. **Hairy Woodpecker.**

8.56. On trunks or large limbs; back speckled with white; white stripe along edge of wing; top of head, or top of head and throat, red. p. 220. **Sapsucker.**

6.83. On trunks or large limbs; stripe down middle of back white; wings and tail barred with black and white; red patch on back of head. p. 223. **Downy Woodpecker.**

A'.

8.25. (As far north as Central Park, N. Y.) In trees or thickets; entire plumage red or reddish; crest conspicuous. p. 151. **Cardinal.**

A''.

9.08. Entire plumage rose-red; wing-bars white. p. 183. **Pine Grosbeak.**

8.56. On trunks or large limbs; back speckled with white; whole top of head, and in male throat also, dark red. p. 220. **Sapsucker.**

[6.33. **Size of English Sparrow.**]

B.

6.22. In flocks in trees; rose-red, brightest on head and rump. p. 181. **Purple Finch.**

6.19.* In flocks in trees, chiefly conifers; vermilion-red, brightest on head and rump . . . . . p. 180. **Red Crossbill.**

4.62. Climbing on trunks and large limbs of trees; under parts reddish-brown; back bluish . . . p. 85. **Red-bellied Nuthatch.**

B''.

6.19. Entire plumage vermilion-red, brightest on head and rump. p. 180. **American Crossbill.**

6.05. Entire bird rose-red; wing-bars white. p. 179. **White-winged Crossbill.**

Blue.

A.

13.02. Flying over water, or perched near it; bill long and pointed; much white showing, but no black; head crested. p. 224. **Kingfisher.**

11.74. In trees; bill not long; much white, and some black about the head and breast; head crested . . . . . p. 198. **Blue Jay.**

[10.00. **Size of Robin.**]

7.01. In open country; upper parts blue; breast reddish. p. 71. ♂ **Bluebird.**

7.01. Upper parts grayish; breast reddish; wing and tail bluish.
p. 71. ♀ **Bluebird.**

[6.33. **Size of English Sparrow.**]

B.

6.07. On trunks or large limbs of trees; top of head black; back bluish-gray . . . . . p. 86. **White-bellied Nuthatch.**

5.90. Near water, especially near the sea; flying about, or perched, often in great flocks; upper parts greenish-blue; under parts white.
p. 143. **White-bellied Swallow.**

5.28. In trees; head and throat black; back and wings grayish-blue; spot on wing white . . p. 121. **Black-throated Blue Warbler.**

4.73. In trees; upper parts grayish-blue; throat and breast yellow; wing-bars white . . . . . p. 124. **Parula Warbler.**

4.62. On trunks or large limbs; back bluish; top of head and line through eye black; under parts reddish-brown or buffy.
p. 85. **Red-bellied Nuthatch.**

BIRDS OF NEW ENGLAND AND EASTERN NEW YORK

BIRDS OF NEW ENGLAND AND EASTERN NEW YORK

PERCHING BIRDS: ORDER PASSERES

THRUSHES: FAMILY TURDIDÆ

Five brown, wood-haunting Thrushes occur in various portions of New York and New England. They resemble one another closely in their general appearance and behavior, and in the quality of their voices. Only one, the Veery or Wilson's Thrush, occurs in summer throughout New England and New York. The Wood Thrush is common in southern New England; the Hermit Thrush and the Olive-backed are common in northern New England. All are shy and more commonly heard than seen; when singing, however, they often sit for a long time on one perch, generally on some low bough, and may be discovered if one approaches them carefully. The Brown Thrush, so called, or Brown Thrasher, is not properly a Thrush. (See p. 95.)

Bluebird. *Sialia sialis*

7.01

Ad. ♂. — Entire upper parts bright blue, particularly when seen in strong light; *throat, breast, and sides reddish-brown;* belly whitish. *Ad.* ♀. — Upper parts grayish, but in flight showing blue on the rump, wings, and tail; the reddish-brown of the under parts much paler than in the ♂. *Im.* — Back spotted with whitish; throat and breast whitish, mottled with brownish spots.

Nest, in a hollow limb, box, or knot-hole, lined with grass. *Eggs,* light blue.

In southern Connecticut and Rhode Island, especially along the Sound, and in the lower Hudson Valley, small flocks of bluebirds spend the winter, feeding largely on berries. In most of New England and New York, however, the Bluebird is only a summer resident, common from early March through October. The breeding birds arrive soon after the first warm days of March; a little later the northern migrants are seen flying over, singly, in pairs, or in small flocks.

The Bluebird frequents country where more or less open ground is broken by low trees or bushes; an old apple orchard is a typical haunt. From some low point of vantage, a post or bough, it watches the ground, flying down at intervals to secure an insect. From the first of April, the warbling of the male becomes less frequent, and by the middle of the month the bird is comparatively silent. The female is now sitting in some hollow limb, or in a box or jar provided for her. In June the second brood is raised, and during the second mating season there is a renewal of the song. The late summer and early fall find the Bluebird in small groups, often associated with Chipping Sparrows, feeding all through the open farming country. Snatches of the spring song are now not infrequently heard, but the characteristic note of this season is the call-note, *cher-wee*, uttered by old and young of both sexes. When the parents are attending their young, they utter a peculiar chatter, like the syllables *chut-ut-ut*. The song is simple, and consists chiefly of variations on the call-note; its charm is due to the gentleness and richness of the voice, and its association with early spring.

The Bluebird should be confused with no other blue bird; the Indigo-bird is blue on the breast, while the Bluebird's *breast* is *reddish-brown;* the female Bluebird is dull-colored, but both females and young show blue in flight. The Bluebird when perched looks round-shouldered, and the male nearly always flutters a wing on alighting.

American Robin. *Merula migratoria*

10.00

♂. — Head black, a white spot above the eye; back grayish; wings brown; breast bay; tail black, *outer feathers tipped with white.* ♀. — Head the same color as back; breast paler than in ♂. *Im.* — Breast spotted with black.

Nest, of grass and mud. *Eggs,* blue.

Small flocks of Robins sometimes spend the winter even in northern New England, feeding on the berries of the mountain ash. In southern New England and the lower Hudson Valley, especially near the sea-coast, Robins often winter in large flocks; they rarely come into the villages, but live in thick groves or swamps of cedar, on the berries of which they feed. The flocks in winter seem to be made up entirely of males. In late January or early February, large flocks of Robins generally appear in the cedar groves, even when there have been none observed previously. In early March the resident Robins return, the males first, in flocks which feed chiefly on the hillsides; by April the females appear and the pairs are scattered about the villages, the males joining in the early morning and evening chorus. The nest is now built on the limb of a tree, or in some crotch, or on a projection of a shed or piazza; the same site is often used year after year. By the end of May the first brood have left the nest. The young may be known by their spotted breasts and by the harsh squawk which they utter. Soon a second nest is built and the male again sings regularly. In midsummer the male Robins and the young of the first brood repair each night to some low wooded swamp; thousands occupy one "roost," coming in from miles about. In the fall Robins linger into November, singing occasionally on warm mornings.

The song is a series of phrases rising and falling, four often constituting a series, which is then repeated or varied. The birds sing even before it is light, and after continuing

for about an hour, cease and disperse to feed. Then there is desultory singing from individuals through the morning. Besides the single *pip* or *pop* of the Robin and the excited *pip, pip, pip,* it has a high, thin hissing note, very like the Cedar-bird's, but a trifle sharper. A common call-note is a shrill *tsee, tsee,* often followed by a low *tut, tut.*

When a Robin flies over an observer, the white feathers under the tail offer a striking contrast to the dark breast. Just after a Robin lights it almost always pumps its tail vigorously once or twice. When a Robin flies up from the ground, the white spots on the tips of the outer tail-feathers are conspicuous.

Hermit Thrush. *Hylocichla guttata pallasii*

7.17

Ad. — Head, back, and wings olive-brown ; *tail reddish-brown ;* throat and breast white, spotted with black.

Nest, on the ground. *Eggs,* pale greenish-blue.

The Hermit Thrush is a common summer resident of northern New York and New England, of the higher portions of the Catskill region, and of Berkshire and Worcester counties, Massachusetts. It also breeds here and there in cool woods in eastern Massachusetts, and on Cape Cod and Martha's Vineyard. It occasionally spends the winter in southern New England and the lower Hudson Valley, feeding at that season on berries. In April and early May, and in October, it is a not uncommon migrant in woodland and thickets, flying up when disturbed into the low limbs of neighboring trees or to stone walls. Here, if it is conscious of observation, it expresses its excitement by slowly *elevating its tail,* till it makes a considerable angle with the body. This action is also characteristic of the bird when disturbed on its breeding-ground, and is then accompanied by a harsh, nasal *speke,* or a thin, hissing note, like the Robin's. It also has in the breeding season a sweet

call-note, like the introductory note of its song; this is often heard about the nest, when the birds are not alarmed. Its ordinary note on migration is a *chuck*. It sings very rarely when on migration, and with only a hint of the power which it reserves for its northern home. As a second brood is raised in late July and early August, the male is in full song at that season.

The song of the Hermit Thrush is, next to that of the White-throated Sparrow, the most noticeable feature of the cool woods of northern New York and New England; it is heard both in deciduous and evergreen forests, but on the higher mountains above 3000 feet it is replaced by the song of the Olive-backed Thrush. Its voice bears a strong resemblance in quality to that of the Wood Thrush, so that the identity of the common thrush of any one region is often a matter of constant discussion among amateur lovers of birds. The ranges of the two overlap so little that it ought to be easy from a study of the map (p. 15) to make a shrewd guess; the form of the song should then decide the matter. The song of the Wood Thrush begins with a phrase which suggests the syllables *ee-o-lee*, and continues with phrases, often containing notes separated by great intervals. The song of the Hermit is divided into cadences of different pitch. Each cadence is introduced by a pure fluted note, then follow two or three higher notes, given with a tremolo effect. These are either all three on the same pitch, or more often the last two are a little higher or lower than the first. The introductory note is held long enough to give a calm, meditative effect to the song; it also serves to give the pitch to the cadences, one of which is so high that it is hardly to be heard at a distance; the others are very full, soprano or mezzo-soprano. There are no bass notes, such as the Wood Thrush strikes, and no great intervals between any two notes.

Its *reddish-brown tail* and the trick of raising it slowly, distinguish the Hermit from the other thrushes. (See also under Fox Sparrow, p. 154.)

Olive-backed Thrush; Swainson's Thrush. *Hylocichla ustulata swainsoni*

7.17

Ad. ♂. — Upper parts olive-brown; *eye-ring buffy; cheek,* when seen in strong light, *washed with buff;* breast whitish, spotted with black.

Nest, in bushes or small trees, bulky and compact. *Eggs,* light greenish-blue, spotted with brown.

The Olive-backed or Swainson's Thrush breeds on Greylock Mountain in Massachusetts, on the higher Catskills, in deep spruce swamps on the southern New Hampshire and Vermont upland, and commonly all through northern New England and in the Adirondacks. In the rest of New England and New York it is a spring and fall migrant, a bird seen only by those who look for it. During the second half of May it may be found in roadside thickets, open woods, and even in the yards of villages and towns, if there is attractive shrubbery and if the locality is favorable to migration.

The bird occasionally sings on migration, early in the morning and toward evening; but on its northern breeding-ground the song becomes a characteristic sound. It is unmistakably the voice of a thrush, like a Veery's song inverted, going up instead of down the scale, but throatier, more gurgling, inferior in purity, richness, and suggestiveness to those of the three other common thrushes. Its call-note is a sharp *whit,* which can be varied in tone and power; it also utters on its breeding-ground a note like the syllables *chee-urr.* In the fall, from the end of September to early October, the migrant birds frequent the dry birch-lined lanes or country roads, or the open glades of woodland; with them are often associated, both in spring and fall, the

Gray-cheeked Thrushes described below. Both species are so shy that it is often impossible to get near enough to distinguish one from the other. If an Olive-back perches for a moment in good light, the observer can make out that the feathers under the eye, the *cheek*, so to speak, are of a *yellower shade* than the rest of the head; a *faint buffy eye-ring*, too, is a distinctive mark. The spotting is not heavy, nor does it extend down the flanks, as in the Wood Thrush; the entire upper parts are olive-brown, nowhere tawny. Sometimes the bird when startled utters its call-note, *whit*, or answers an imitation of it; this note is characteristic, and settles its identity.

GRAY-CHEEKED THRUSH. *Hylocichla aliciæ*
BICKNELL'S THRUSH. *Hylocichla aliciæ bicknelli*
7.58; 6.25–7.25

Ad. ♂. — Upper parts olive-brown; *no buffy eye-ring* or *wash on cheek;* under parts white; throat and breast spotted with black. *Nest*, in scrub spruce or fir. *Eggs*, greenish-blue, spotted with brown.

The Gray-cheeked Thrush is a migrant through New England and New York. Its habits and haunts are very like those of the Olive-backed Thrush, and it appears at about the same time. On the higher Catskills and on the high mountains of northern New England just below the timber line, where the stunted spruce and fir grow close together, a smaller race of this thrush, known as Bicknell's Thrush, is a common summer resident.

As a migrant it sings less than the Olive-backed Thrush, but on the mountain summits its song and call-note are constantly heard, especially at dawn and at dusk. The call-note is like the syllables *fee'-a*, sharp and petulant, often rising to a high strident note suggesting a nasal note of the Red-winged Blackbird. This call, like the Veery's, may be much modified and subdued. The song is very similar in

quality to the Veery's, though perhaps a trifle thinner, with a marked upward inflection at the close. It may be written thus: *te-dee'*, *dee͡a*, *te-dee͡ee*, with a slurring effect on all the long syllables. On Mount Mansfield, in Vermont, the hotel is in the midst of the breeding-ground of the Bicknell's Thrushes, and is an excellent place to observe them. Much remains to be learned about their nesting habits.

To distinguish the Gray-cheek from the Olive-back, one must see the side of the head in strong light. If there is no difference in shade between the top of the head and the cheek, — if both are gray, — and if there is no tawny color on head or tail, then the bird is a Gray-cheeked Thrush.

Wilson's Thrush; Veery. *Hylocichla fuscescens*

7.52

Ad. — Upper parts brown, with a distinct, though often not a strong, *tawny* tinge; under parts white; breast and sides of throat washed with yellowish-brown, *lightly spotted* with tawny-brown. *Nest*, on or near the ground, in wet woods. *Eggs*, greenish-blue.

The Veery is a common summer resident all through New York and New England, wherever the ground is moist and there are trees. On the higher mountains it rarely ascends above a level of 1500 feet, and in northern New England is not common away from the river valleys. It comes in early May, but does not sing for a week or ten days after its arrival; then it sings freely till July. During August it is rarely seen, and probably leaves during that month or early in September. It may often be seen feeding in any shaded road that passes through its haunts, its quick run suggesting the Robin.

The song of this thrush, from which one of its names is derived, consists of three or four phrases, the last two lower than the preceding and ending with a strong vibrating chord, suggesting a sound muffled by a tube. The song proceeds from the recesses of swampy woodland, or ceasing,

is followed by a low sharp *phew* or a higher *phee-oo*, which in turn may be subdued or softened or varied in tone.

The Veery's *buffy*, comparatively *unspotted breast*, and its *tawny head, back, and tail*, distinguish it from the other thrushes. The Brown Thrush, so called, or Brown Thrasher, has white under parts heavily spotted with black.

Wood Thrush. *Hylocichla mustelina*

8.29

Ad. — Head and upper back, *reddish-brown;* lower back and tail brown; breast and sides of belly white, *heavily spotted* with large black spots.

Nest, generally in a sapling about eight feet up. *Eggs*, greenish-blue.

The Wood Thrush is a common summer resident of southern New England and the Hudson Valley, but north of Massachusetts it is only found up the valleys of the Connecticut, the Merrimac, and their chief tributaries, and along Lake Champlain. It is true that it has been found at Willoughby Gap, and at Lake Memphremagog in Vermont, near Mt. Moosilauke, at Jefferson, and at Franconia in New Hampshire, but in most of the upland country of New England — in Worcester and Berkshire counties in Massachusetts, and farther north, wherever spruce and fir are found, in all of Maine but the extreme southwest, in the Adirondacks, and in nearly all of New Hampshire and Vermont — the Hermit, Veery, and Olive-backed are the only common thrushes. The Wood Thrush comes in early May, and is only occasionally seen after the first of September. In southern Connecticut and in the neighborhood of New York city it is a familiar dooryard bird, but in the rest of its northern range it is a bird of rich woods, especially where there is young growth near water.

The Wood Thrush is in song from the morning of its arrival till July, often all through the day, especially in cool

woods, but more noticeably in late afternoon and early evening, when many other birds are silent. After the song ceases, one may still hear in the darkness a *pip pip pip pip*, which serves also as the alarm-note with which breeding birds greet an intruder. In August the Wood Thrush and the Veery become silent, and are seldom seen; they slip southward almost unnoticed.

This is the largest of our true brown thrushes. (The Brown Thrush, so-called, is the Thrasher; see p. 95.) It is the most heavily spotted, not only on the breast, but also on the flanks; is tawny on the *head and upper back*, and olive-brown on the tail. For a suggestion of the difference between the song of this species and that of the Hermit Thrush, see p. 75.

KINGLETS: FAMILY SYLVIIDÆ

Ruby-crowned Kinglet. *Regulus calendula*

4.41

Ad. ♂. — Upper parts gray, with a greenish tinge in strong light; *crown* with a partially concealed patch of *flame-colored* feathers; wing-bars whitish; under parts dull whitish. *Ad.* ♀. — Lacks the crown-patch.

Nest and *Eggs* as in the following species.

The Ruby-crowned Kinglet is a rather common migrant through New York and New England, in April, and again in October. It probably breeds sparingly in eastern Maine, but in the rest of New England it is unknown in summer. In the migrations it frequents the edges of woodland, or pastures overgrown with bushes and small trees. Like its relative the Golden-crowned Kinglet, it is often found in evergreens, either red cedar groves or the spruces in plantations. Its feeding habits are similar to its relative's. It inspects the twigs with restless activity, frequently flitting its wings.

The harsh, grating call-note of the Ruby-crowned King-

let is often the first thing that attracts our attention to it. Often the repetition of this note is followed by the song, a performance deservedly noted for its sweetness, brightness, and vigor; it may always be recognized by the high, thin introductory notes and by a phrase of three notes, *tee!-dĭ-dĭ* repeated several times toward the end of the song. The song is often uttered in the fall.

FIG. 1. Ruby-crowned Kinglet

When a male is excited, the feathers of the crown are slightly raised and show the flame-colored patch from which the term ruby-crowned has been derived. If two males pursue each other, the color actually seems to blaze forth, but often no color at all is visible. The species, nevertheless, may always be distinguished from the Golden-crowned Kinglet by the *absence* of *any markings over the eye*, the adult Golden-crown always showing at every season the black stripes inclosing the yellow crown. The eye of the Ruby-crown is surrounded by a whitish ring which makes it seem large and prominent for so small a bird.

GOLDEN-CROWNED KINGLET. *Regulus satrapa*

4.07

Ad. ♂. — Upper parts gray, with a greenish tinge in strong light; wing-bars whitish; *crown orange*, edged with *yellow* and *black;* line over the eye white; under parts dull whitish. *Ad.* ♀. — Crown-patch entirely *yellow* edged with black. *Im. in summer.* Lacks yellow crown-patch, black lines very indistinct.

Nest, globular, of moss, etc., in an evergreen from six to sixty feet up. *Eggs*, sometimes as many as ten, dull white, faintly speckled with buffy.

The Golden-crowned Kinglet is a common summer resident in the Canadian Zone (see map, p. 15), but throughout the rest of New York and New England a winter visitant only, arriving in late September and leaving by the end of

April. In northern New England it is not common in winter. Kinglets are often associated in winter with Chickadees; if, therefore, the sharp *tsit* of the Chickadee is heard in fall or winter, it is well to follow the sound and, when the Chickadees appear, to keep eye and ear alert for any of their traveling companions. Often the Kinglets travel alone, searching restlessly the twigs of trees and hedges, following perhaps a well-marked course through plantations and woodland, and calling to each other with a thin sharp *see-see-see*. If the birds are in thick evergreens, spruces or cedars, it is very hard to get even a glimpse of them, but in leafless apple-trees, a favorite resort, they display their brightly marked heads and quick, restless ways. They do not cling to a twig upside down like the Chickadees, but occasionally one flutters for an instant before the desired morsel and picks it off. Their numbers vary from winter to winter, and even in the course of a single season there seems often to be a fluctuation. In April their numbers increase, as the birds that have wintered to the southward pass through as migrants. In March and April the males continue the lisping note, put more and more power into it, and then by a descending trill fall, as it were, from the height to which they have scaled, — this is the song of the Golden-crowned Kinglet. The lisp of the Chickadee, the *screep* of the Brown Creeper, and the *see-see-see* of the Kinglet all have a strong resemblance. The last two are sharper and more finely drawn out, the Kinglet's is quickly repeated, while the Creeper's is one long continuous note.

Fig. 2. Golden-crowned Kinglet

In summer the Kinglets keep almost wholly in the spruces, and are thus even more inconspicuous than in winter; their song and call-notes, however, make their presence known. Their call is now often longer and still more like

that of the Creeper. The young, which are found in little companies in late July and August, lack the head-markings of the adult; they may be recognized by their small size and by their lisping notes, identical with those of their parents.

NUTHATCHES AND TITS: FAMILY PARIDÆ

Two Nuthatches and three Tits or Chickadees occur in New York and New England. The White-bellied Nuthatch and the common or Black-capped Chickadee are found everywhere; the Hudsonian Chickadee is confined to northern New York and New England; the Tufted Tit does not regularly occur north of New York city. Nuthatches fly in undulations something after the manner of Woodpeckers.

HUDSONIAN CHICKADEE. *Parus hudsonicus*

5.35

Ad. — Top of *head brownish*; back brownish-gray; throat black, separated from the brown by a stripe of white; breast and middle of belly white; side of belly reddish-brown.

Nest, in holes in trees. *Eggs*, spotted with reddish-brown.

The Hudsonian Chickadee is a permanent resident of the extensive spruce forests on the higher mountains of New Hampshire and Vermont, in the Adirondacks and in northern and eastern Maine. In summer it is confined in the White and Green Mountains to the spruce belt above 3000 feet, but in autumn it wanders down into the valleys, in company with migrating warblers. In winter a few occasionally wander southward; small flocks have been observed on Mount Greylock in Massachusetts, and stragglers occasionally occur even in eastern Massachusetts. Its habits are very similar to those of the common Chickadee; in fact, the two not infrequently wander about together. Bones or bits of meat left about logging camps in winter are equally attractive to either species.

The *dee dee dee* of the Hudsonian Chickadee sounds more "babyish" than that of the common species; the notes are lower and more drawled. The Hudsonian Chickadee seems to have no note that corresponds to the *phee-bee* of the common Chickadee.

Chickadee. *Parus atricapillus*

5.27

Ad. — *Top of head* and *throat black;* sides of head, and belly white; back, wings, and tail gray; wing-feathers edged with white; flanks washed with light brownish, especially in the fall. *Nest*, in a hole in a tree. *Eggs*, often as many as eight, white, spotted with reddish-brown.

The Chickadee is a permanent resident throughout New England and New York; in the southern portions of its range it is less common in summer than in winter. At this season little flocks of five or six pass through the woodland, orchards, and plantations, often accompanied by Kinglets, a Brown Creeper, a Downy Woodpecker, or a Nuthatch. As spring approaches, the winter bands separate into pairs, which then often retire from the neighborhood of villages, so that a notion prevails that the Chickadee is only a winter resident. The pair, too, become very silent; the male, however, occasionally utters his whistled *phee-bee.* The nest is placed either in a natural cavity or in a hole picked out of a soft birch stub by the birds themselves. The pure whistle above described, though uttered oftenest in March and April, may be heard in any month of the year. Besides this song the Chickadee has various little lisping calls, a note something like the syllables *tout de suite*, and the well-known *tsic-a dee-dee.* When feeding, the Chickadee has a habit of clinging upside down to the tips of twigs; occasionally it flies to a limb and there hammers open a seed or a tough cocoon. If bones, suet, or broken nuts are hung on the trees near a window, Chickadees will become constant and familiar vis-

itors throughout the winter. The Chickadee is readily told by its *black throat and top of head*, and white cheeks.

Tufted Titmouse. *Bœolophus bicolor*

6.00

Ad. — Forehead black ; upper parts, wings, and tail gray; sides of belly reddish-brown ; rest of under parts white ; head *crested.*

Nest, in a hole in a tree. *Eggs*, white, spotted with reddish-brown.

The Tufted Tit is a permanent resident of New Jersey, as far north as Orange, and of Staten Island, though not common in the northern portion of its range. In south-western Connecticut it occurs only as a rare visitant; it is absent from the rest of New England. Its loud whistle, like the syllables *peto*, attracts notice to it, and its *conspicuous crest* and *plain gray* colors make it easy to identify. It has also lisping calls very like the Chickadee's, and a hoarse *dee dee dee.*

Red-breasted Nuthatch; Red-bellied Nuthatch. *Sitta canadensis*

4.62

Ad. ♂. — Upper parts bluish-gray, top of head and *stripe through eye black ;* line over eye white; under parts reddish-brown.

Ad. ♀. — Top of head and stripe through eye bluish-gray; under parts paler.

Nest, in a hole in a tree. *Eggs*, white, speckled with reddish-brown.

In northern New England and New York, in tracts of spruce, the Red-bellied Nuthatch is generally an abundant permanent resident. The forests are sometimes filled with its little nasal call. At very irregular intervals, it moves southward in large numbers, and becomes a common fall migrant, in September and October, throughout southern New England and the Hudson Valley. After such a

migration many individuals stay through the winter, and some linger till May. As an ordinary thing, however, these birds find food enough in the north, and are either entirely absent in southern New England in winter, or occur only as straggling migrants, or as rare winter visitants. When they come south, they resort either to the pines or to the Norway spruces, clinging to the cones till they extract the seeds, then flying with nervous little movements to a limb where they either hammer open the seed, or as frequently hammer it into a crevice for safe-keeping. The Red-bellied Nuthatch is a very active, restless bird, and its short tail gives it a comical air of fussiness. The ordinary call-note is a high-pitched nasal *ank, ank;* when the bird is excited this note is repeated very rapidly and for a long period. It has, besides, a call-note like the syllable *hüt*, which is often varied in pitch. Its nasal call is one or two tones higher than that of the following species.

Fig. 3. Red-bellied Nuthatch.

If a Nuthatch has bright reddish-brown under parts, there can be no doubt as to its identity, but in spring and summer the color fades, and the female in particular is almost grayish below. It must then be distinguished from the White-bellied Nuthatch by its small size, and by the *black* or bluish-gray *line through the eye*

White-breasted Nuthatch; White-bellied Nuthatch. *Sitta carolinensis*

6.07

Ad. ♂. — Upper parts grayish-blue, except the crown and front part of back, which is black; under parts white; feathers under the tail reddish-brown; tail short and square, all but the central pair of tail-feathers black, the outer ones with large white spots. *Ad.* ♀. — Similar to the ♂, but the black of head and back replaced by dark grayish-blue.

Nest, in a hole in a tree. *Eggs*, white, thickly spotted with brownish or lavender.

The White-bellied Nuthatch is a permanent resident of southern and central New England and the lower Hudson Valley, and a summer resident throughout New England and New York, but it is a local bird, and very rare in summer in many places. It spends almost its entire time on the trunks and large limbs of trees, where it hunts in a characteristic manner, sometimes peering over the sides, like a Black and White Warbler, often walking entirely around the limb, and not infrequently walking head downward on the trunk and observing an intruder with outstretched head. Unlike its relative, it rarely visits conifers, keeping chiefly to deciduous trees.

FIG. 4. White-bellied Nuthatch

Attention is often drawn to the White-bellied Nuthatch by its nasal *quank;* the pitch of this call-note is very close to B-flat, though it varies to B, and it is always lower and heavier than the similar call-note of the Red-bellied Nuthatch. Its song, which it begins to utter early in March, resembles the syllables *tŏo-tŏo-tŏo*, quickly repeated. When singing, the Nuthatch generally perches on some small twig. The male brings food to the female while she is sitting.

A Nuthatch may be identified by its long, straight, slender bill, by its manner of clinging to the trunks or large limbs of trees, and by its grayish-blue black. The White-bellied Nuthatch may be distinguished from the preceding species by its greater size, by its pure white under parts (reddish only under the tail), and most surely by the absence of a black line through the eye; the white of the fore-neck extends up a little behind the ear.

CREEPERS: FAMILY CERTHIIDÆ

Brown Creeper. *Certhia familiaris americana*

5.66

Ad. — Head, upper back, and wings brown, finely speckled with gray ; rump reddish-brown ; tail grayish brown, unspeckled ; tail-feathers pointed ; under parts white ; bills slender, slightly curved.

Nest, in a crevice under a flake of bark. *Eggs*, white, spotted chiefly about the larger end with reddish-brown.

The Brown Creeper is a winter visitant in southern New York and New England from the end of September to the end of April ; in northern New York and New England it is absent or rare in winter. In summer it inhabits the deep woods of the Canadian Zone, keeping chiefly to the spruces, but occurring also in forests of hard wood. Nests of the Brown Creeper have occasionally been found in eastern Massachusetts, but its occurrence there in summer is exceptional (see map, p. 15). It is everywhere a common migrant in April, late September, and early October. It spends its whole existence on the trunks and large limbs of trees. In winter it often associates with Chickadees and Kinglets, and like them has routes along the village streets and through the plantations, or through the woods. It may often be detected by its note, a thin, fine *screep*, like the Kinglet's, but not broken into parts, and almost exactly like the Cedar-bird's wheeze. Soon the eye is caught by the flutter of the Creeper from one tree to the base of the next. Its usual method of feeding is to ascend *close to the trunk*, partly supported by its tail, often making a spiral and reappearing higher up, or flying off to begin again at the base of the same or another tree.

In March or April a well-trained ear may occasionally hear the Creeper's song, a wiry little performance suggesting the syllables, *wees, wee'-si, wi-see'*. If two are together at this season, they utter a slight *tsip*, and often engage in an animated chase among the trees.

THRASHERS, WRENS, ETC.: FAMILY TROGLODYTIDÆ

Wrens: Subfamily Troglodytinæ

Five species of Wren occur in New York and New England. The two Marsh Wrens are found only in extensive marshes or wet grassy meadows. The Great Carolina Wren is not regularly found north of southern Connecticut. The House Wren, though local, is fairly common from Massachusetts southward, and occurs here and there in northern New England. The Winter Wren is a common summer resident of the moist forests of northern New York and New England, and occurs elsewhere as a migrant. Wrens are noisy and active, but secretive birds, concealing themselves in tall grass, brush heaps, or stone walls. They often cock their tails over their backs. They are all rather small and of a nearly uniform brown color.

Long-billed Marsh Wren. *Telmatodytes palustris*

5.20

Ad. — Head blackish-brown, unstreaked; middle of back blackish, spotted with white; rest of back, wings, and tail brown; tail barred with black; *line over eye white; under parts white;* only the sides washed with buff.

Nest, globular, with the opening at the side; made of grasses or cat-tails, and fastened to the stalks of cat-tails or to the stems of bushes. *Eggs*, chocolate-brown, spotted with darker brown at the larger end.

The Long-billed Marsh Wren is a common summer resident of the tidal marshes from Staten Island to eastern Massachusetts. It is also common near the coast in extensive cat-tail marshes along sluggish streams, as at Wayland, Mass., but in the interior of New England it is rare or absent, except along the valley of the Connecticut River, where it occurs as far north as Springfield. The Wrens

arrive early in May and remain into October. A few even spend the winter in thick tangles of cat-tails near the coast. In the tidal marshes they frequent the ditches, and nest in the high-tide bushes (*Iva*).

The Wrens sing all day and through much of the night, often flying up over the cat-tails or grass, and singing as they descend. In making their way through cat-tails, they grasp the stalks with their strong feet, often standing with each foot on a separate stalk and their tails cocked over their backs so far that the white under tail-coverts show. When disturbed, they often show themselves only for a moment, and then disappear into the rushes, where they keep up a harsh scolding, or when reassured, pour out again their rapid, bubbling song. The alarm-note is an energetic *tschuk*. The nest is made of the stalks of cat-tails bent into a globular shape and fastened to cat-tails or to high-tide bushes. It is lined with the soft down from the cat-tail head, and is entered through an opening at the side. The nest that contains the eggs is often a shabby-looking affair, made of old brown stalks, while all about are empty nests of fresh green cat-tails. These are busily woven by the male — why, no one knows.

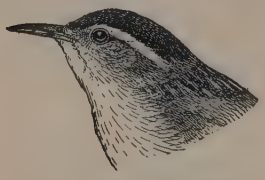


FIG. 5. Long-billed Marsh Wren

The *white line over* the *eye*, the blackish, unstreaked head, and the *black* patch on the *upper back* distinguish this wren from the following species.

SHORT-BILLED MARSH WREN. *Cistothorus stellaris*

4.00

Ad. — Upper parts brown, streaked with black and white; *lower parts buffy*, especially on the sides; *no distinct line over eye.*

Nest, globular, with the opening at the side; made of grasses bent over and fastened to the stalks of stout grass, on or near the ground. *Eggs*, white, generally unspotted.

The Short-billed Marsh Wren is a somewhat rare and local summer resident throughout southern and central New England and New York. It arrives in May and stays through September. While the Long-billed Marsh Wren lives among cat-tails, the Short-billed prefers the sedgy meadows that border sluggish freshwater brooks or rivers. If the meadows are extensive, there may be hundreds in a colony, or it may consist of only a pair or two. A few have been found as far north as Dublin, N. H., and several large colonies in Berkshire County, Mass. The bird is common in the Purgatory Meadows at Norwood, Mass., and in the marshes bordering the Sudbury at Wayland, Mass.

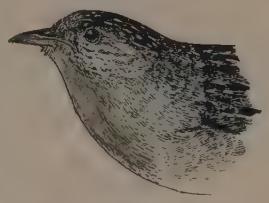


FIG. 6. Short-billed Marsh Wren

While the song of the Long-billed Marsh Wren resembles the House Wren's in its volubility, that of the Short-billed Marsh Wren suggests rather some species of sparrow. It may be represented by the syllables *tsip tsip tsip tsipper tsipper tsipper*, the first two or three notes staccato, the rest running rapidly down the scale. The call-note is like the opening note of the song.

The bird clings to the grass stalks in the same attitude as its relative, with tail cocked over its back, but it may be distinguished by the *absence* of a *white line over the eye*, and by its *streaked head* and *upper back*, which lacks the black patch.

WINTER WREN. *Olbiorchilus hiemalis*

4.06.

Ad. — Upper parts deep brown; *line over eye pale brown or light tawny;* wings and tail crossed with narrow dark bars; under parts brownish or tawny, lighter than upper parts, but barred with blackish and white, and darker than in following species; tail less than 1½ in. long.

Nest, on the ground, often under the roots of an overturned tree. *Eggs*, often six or seven, white, speckled with reddish-brown.

The Winter Wren is a common summer resident of the Canadian Zone (see map, p. 15), a rare winter visitant in southern New England, and a not uncommon winter visitant in the lower Hudson Valley. It passes north in April, and returns in September and early October, but it is rarer as a migrant than its abundance in the north leads one to expect. In winter and on migration it frequents brush heaps, stone walls, or fallen trees, particularly along the banks of woodland streams. It seldom sings while migrating. It breeds rarely in deep-wooded swamps on the upland of Worcester and Berkshire counties in Massachusetts, and in southern Vermont and New Hampshire, but as soon as one enters the damp forests of Mount Greylock in Massachusetts, the Catskills, and the higher mountains of northern New York and New England, the song of the Winter Wren becomes one of the characteristic summer sounds; it is as if the bird had been uncorked, Thoreau said, and the song left running.

The song is long and high, in two equally balanced parts, the first ending in a contralto trill, the second in a very high trill; after a little interval the song is repeated or answered. The Wren sings either from some high dead stub, or from the mossy logs over which it creeps in search of food. When alarmed on the breeding-ground, the bird utters a sound like the syllables *crrrrip*, and at other times a sharp *chick*, very like a note of the Song Sparrow, but quickly repeated. It has also a fashion of *bobbing* or *curtsying* when observed. When searching for food, it seems often to skip, rather than to fly, from one log to the next.

To distinguish a Winter Wren from a House Wren is a difficult matter. Except in September, however, the two will rarely occur together. The House Wren is nearly an inch longer, and much of the additional length is in the tail; its

under parts are lighter, and it is likely even in the fall to utter its grating scolding-note. The Winter Wren utters a *chick* of surprise, and generally bobs or curtsies; this bobbing action will identify it at once. The Winter Wren has a light *line over the eye*, which the House Wren *lacks*, but the line is often rather indistinct, and especially difficult to see clearly on such an active and secretive bird.

House Wren. *Troglodytes aëdon*

5.00

Ad. — Upper parts warm brown; wings and tail faintly barred with black; under parts grayish, the flanks faintly barred with black; bill long, slender; tail more than 1½ in. long.

Nest, of sticks, etc., in a hole in a tree or box. *Eggs*, sometimes as many as eight, thickly speckled with pinkish-brown.

The House Wren is a common summer resident in most of New England and the lower Hudson Valley, but it is a local bird, and may be wholly absent from certain regions. It is rare in northern New England, and confined to the Transition Zone. Occasionally it is found nesting in dead trees in the burnt tracts away from the settlements, but as a rule any wren seen in the *forests* of northern New England is a Winter Wren. The House Wren arrives late in April, or early in May, and stays till October. It frequents apple orchards, or the yards about houses. Its small size, brown, unstreaked upper parts, and its pert ways readily distinguish it from other small birds. It often cocks its tail over its back, especially when scolding an intruder. When it sings, it holds its tail pointed downward.

The House Wren's song is a vigorous, bubbling performance, the notes following each other very rapidly. Its scolding-note is a harsh grating chatter, often uttered by the bird from its hiding-place in a stone wall or a brush heap, into and out of which it slips with the ease of a mouse. (See preceding species.)

Carolina Wren. *Thryothorus ludovicianus*

5.50

Ad. — Upper parts rich reddish-brown; *line over eye whitish;* throat white; breast and belly washed with buff.

Nest, bulky, of sticks, etc., in a hole in a tree or in some cavity about buildings. *Eggs*, whitish, speckled about the larger end with reddish-brown.

The Carolina Wren is a very rare permanent resident of southern Rhode Island and southern Connecticut, and a rather common summer resident of the eastern slope of the Palisades; it occasionally wanders into Massachusetts. The bird's favorite haunts are brushy tangles. If a male is anywhere about he can hardly be overlooked; he is a constant singer, even in winter, and his song is so loud and clear that it can be heard easily a quarter of a mile away. It consists of short phrases of from two to four notes repeated again and again in a loud clear whistle. These phrases vary greatly; some of the common forms may be written *twip'pity, twip'pity; whiddy you', whiddy you' whiddy you'; thrĭ'ou, thrĭ'ou, thrĭ'ou.* Certain phrases suggest notes both of the Cardinal and the Tufted Tit; a beginner should make a careful study of the notes of these three species. The alarm-note is a rather smooth *peurr.*

Fig. 7. Carolina Wren

A Carolina Wren is easily recognized by its wren-like behavior, by the rich brown of its upper parts, and by the conspicuous *whitish line* over its eye.

Thrashers and Mockingbirds: Subfamily Miminæ

The Catbird, Brown Thrasher, and Mockingbird form a closely related group, which is included in the same family with the Wrens.

Brown Thrasher. *Toxostoma rufum*

11.42

Ad. — Upper parts *reddish-brown;* wing-bars white; bill long, slightly curved; tail very long; under parts white; breast, belly, and sides of the throat spotted with black.

Nest, of coarse twigs, on the ground, or in a low bush. *Eggs*, white, thickly speckled with reddish-brown.

The Brown Thrasher, or Brown Thrush, is a common summer resident of southern New England and the lower Hudson Valley; it becomes less common on the upland of central New England and is absent from all the less cultivated northern portions of New York and New England. It arrives toward the middle of April and remains till October. It frequents dry, scrubby growth, roadside thickets and overgrown pastures, scratching on the ground and slipping into the bushes when alarmed, with the ease of its companion the Chewink; it may often be seen running in the roads. When a pair have a nest or a young bird hidden in a thicket, they manifest great excitement at the approach of an intruder, uttering a loud smack and a mournful *ti-yoo-oo*, or a puffing or hissing sound. The yellow eye seems to glare at such times. The male sings from a high perch, often the uppermost spray of a tall tree, with tail depressed. The song is the most brilliant performance given by our New England birds, a succession of finely executed phrases, very often in pairs, and of great variety. Thoreau's phrasing of it is, "Drop it, drop it, — cover it up, cover it up, — pull it up, pull it up, pull it up."

A Brown Thrasher is readily told by the *reddish-brown* color of its upper parts and by its *long tail*.

Catbird. *Galeoscoptes carolinensis*

8.94

Ad. — Entire body *slaty gray*, except the *head* and tail, which are *black;* feathers under base of tail chestnut.

Nest, of sticks, in a thick bush. *Eggs*, glossy greenish-blue.

The Catbird is a common summer resident of New England and New York, except in the mountainous northern portions, though it is found along large streams even in northern Maine. It arrives in May and lingers into October. It frequents shrubbery and thickets, especially the tangles of vines and bushes near water. It is fond of fruit, and may often be seen in midsummer with a raspberry in its bill. Its ordinary call-note, from which it gets its name, is familiar; it is, perhaps, more snarling than a cat's mew. It utters, besides, a mellow *chuck*, and occasionally a grating chatter, *kak kak kak*. Its song is very similar to that of the Thrasher, but it is not so vigorous, and though it undoubtedly does contain fine passages, it is marred by the constant introduction of harsh phrases. When singing, the Catbird often sits on some high spray, with tail depressed; when it hops along the ground or on a fence, the tail is either cocked at an angle or thrown jauntily from side to side. The bird always has an alert, saucy air.

Mockingbird. *Mimus polyglottos*

10.50

Ad. — Upper parts ash-gray; wings blackish, with a *broad white bar;* three inner pairs of tail-feathers black, fourth and fifth pairs white, edged with black, outer pair white; under parts grayish-white.

Nest, of twigs, weed-stalks, etc., in a thick bush or low tree. *Eggs*, bluish or greenish, spotted with reddish-brown.

The Mockingbird is a rare visitant in southern New England and the lower Hudson Valley; there are several records of its breeding in New England, notably near Springfield. Single birds are not infrequently seen, especially in the fall or early spring; some of these may, of course, be escaped cage-birds. An observer must guard carefully against taking a Shrike for a Mockingbird; the two birds resemble each other somewhat in figure and coloration, but the Shrike in

adult plumage has black wings and tail and a black stripe through the eye, while the Mockingbird has *brown wings* and tail and a *gray head.* If the bill can be examined at close range, the two birds can be readily distinguished; the Shrike's is like a Hawk's, thick and hooked; the Mockingbird's is like a Catbird's, long and rather slender, with no hook. (See Fig. 30.)

TITLARKS: FAMILY MOTACILLIDÆ

American Pipit; Titlark. *Anthus pensilvanicus*

6.38

Ad. — Upper parts brownish-gray; *end of outer tail-feathers white;* next pair tipped with white; line over eye whitish or buffy; throat white; breast streaked with black; belly white.

The Titlark is a migrant through New England and New York, rare in New England in spring, but common in the fall, especially near the coast. It passes north in April and May, and returns in late September, October, and early November. Near the coast it frequents the short grass of the tidal marshes or grassy hills, where it feeds in company with Shore Larks and Snow Buntings. It often occurs in large flocks, which rise when disturbed and fly off over the marsh with a shrill *tsee-tseep tsee-tsee-tseep,* very like the call-notes of the Shore Lark. Inland it is fond of ploughed fields, mud-flats, or low meadows, but is also found on grassy hilltops, even at great elevation. Its long *tail* is *constantly wagged* as it walks; this wagging should identify it at once, as the birds with which it consorts do not have this trick, and the other birds that do, the water-thrushes, etc., are not found in open fields. When the Titlark flies, it shows two *outer tail-feathers* tipped with *white.*

WARBLERS (PROPERLY WOOD-WARBLERS): FAMILY MNIOTILTIDÆ

The term Warblers is applied in America to a very large family of small birds, many of which live almost wholly in trees. The number of species to be distinguished often discourages a beginner, but many are confined almost wholly to certain kinds of country, and much may be done by learning where to expect each one. The males, moreover, are generally brightly marked, often with yellow; the females and young are harder to distinguish. Half a dozen species occur commonly throughout New York and New England and are easily distinguished, both by their appearance and from the kind of country which they prefer; these are: the Redstart, wherever trees and open spaces are combined, especially near water and often near our houses; the Northern Yellow-throat, in low bushes in wet places; the Black and White Warbler, on the trunks of trees in open woodland; the Oven-bird, on or near the ground in all kinds of woodland; the Black-throated Green, in evergreens, and the Yellow Warbler, either in the shrubbery near houses, or in the willows along water-courses. The Chestnut-sided Warbler occurs nearly everywhere in New England, being absent only where extensive coniferous forests still exist; it delights in dry roadside thickets and the second-growth in clearings. The Pine Warbler is common wherever pitch pine is abundant; it breeds also in white pine groves, but is not found in the Canadian Zone. In the spruce forests of northern New England the Myrtle Warbler is abundant, occurring even in the dooryard, if spruce-trees surround the house. In wilder country, where young spruces grow, the Black and Yellow Warbler is common, and on mountains, in stunted spruce, the Black-poll is abundant.

In southern New York and New England the northern species occur as more or less common migrants in April and

May, and September and October. They are to be looked for in the broad valleys of large streams, or near the coast, occurring in almost any bit of woodland or orchard along their paths of migration (see p. 11); they now occur in mixed flocks, often associating with Vireos and Kinglets, between which they are intermediate in size. Their songs are seldom beautiful, and often hard to distinguish; they are in full song in spring, but few sing in the fall. Several species change their plumage in the fall; the Black-poll, Myrtle, and Yellow Palm Warblers are the commonest examples of this class.

The Oven-bird, the Water-thrushes, and the Yellow Palm Warbler obtain their food on the ground; the Black and White Warbler gleans from the trunks and large limbs; the Redstart often pursues an insect through the air; the Yellow-rump is an expert fly-catcher, but in winter lives largely on bayberries. The Parula and the Blue-winged Yellow often cling to the tip of a twig like a Chickadee. Nearly all the others pick their food, chiefly insects, from twigs and leaves.

American Redstart. *Setophaga ruticilla*

5.41

Ad. ♂. — Head, throat, and back lustrous black; sides of breast and flanks reddish-orange; large *bar* across *wing* and *tail* light *salmon;* tips of tail-feathers black for a third of their length; belly white. *Ad.* ♀. — Head gray; throat grayish-white, orange and salmon replaced by yellow. Young ♂ resembles the female until the third year.

Nest, a soft cup, generally in the crotch of a tree or sapling from ten to thirty feet up. *Eggs,* thickly spotted with dark brown, chiefly around the larger end.

The Redstart is a common summer resident throughout New York and New England, absent only at high altitudes. It arrives early in May and remains through September. The male Redstart's bright colors always attract attention and excite admiration, and, unlike its rival, the Blackburnian

Warbler, it may easily be seen by the beginner. It is common in the shrubbery about dwellings, and in its restless course flies from twig to twig, sometimes pursuing an insect to the ground at the observer's feet. Both sexes have a habit of keeping the tail spread like a fan, so that the yellow or salmon band is very conspicuous.

It needs practice to distinguish the song of this species from that of the Yellow Warbler, often its neighbor about our houses. The Redstart's song is less complicated: *wee'-see'-see'* is its shortest form; *wee'-see-wee'-see-wee'* is another. All the phrases are on one key, and are almost never followed by the additional phrase with which the song of the Yellow Warbler ends. The male in his first spring wears the gray and yellow of the female, so that one often hears the song uttered apparently by the female.

Canadian Warbler. *Wilsonia canadensis*

5.61

Ad. ♂. — Upper parts *ashy gray;* crown blackish, especially on the forehead; breast crossed by a *broad band of black spots* which separate the *yellow throat* from the *yellow belly. Ad.* ♀ and *Im.* — The blackish crown lacking; spots on breast faint.

Nest, in mossy banks and under roots. *Eggs,* white, spotted about the larger end with reddish-brown.

The Canadian Warbler is a migrant through southern New England and the lower Hudson Valley in the second half of May and in September. As a migrant it is found chiefly in wet woodland, where it keeps rather low in the bushes, though it may occur in dry places, and when singing often mounts fairly high in trees. It breeds from the edge of the Canadian Zone northward, occurring here and there in deep, cool swamps,

Fig. 8. Canadian Warbler

even in central and eastern Massachusetts, and not uncommonly in the highlands of western Massachusetts. It is often abundant in the thickets of mountain maple on ill-drained mountain summits. It is very inquisitive, and an intruder may frequently hear its alarm-note, *chick*, or catch a glimpse of the *black "necklace"* across its *yellow breast* as it flies low in the bushes. Its song is a rather hurried outpouring of notes, introduced by the same *chick* which it uses as an alarm-note. (See Magnolia Warbler, Fig. 18, p. 119.)

Wilson's Warbler. *Wilsonia pusilla*

5.00

♂. — Upper parts bright olive-green in a strong light; *crown black;* forehead and *under parts bright yellow.* ♀. — Black crown generally wanting.

Nest, on the ground in wet woods. *Eggs*, white, speckled with reddish-brown, and with lavender.

The Wilson's Warbler is a rather uncommon migrant through New England and New York, occurring in the latter half of May and in September. It breeds rarely in the extreme northern and eastern portions of Maine. It is generally found in trees or bushes near water, along the edges of swamps or in the bushy borders of streams, though, like most migrants, it may appear, when more than usually common, in any suitable cover. Its song suggests to most observers the song of the Yellow Warbler; it is briefer, less lively, and ends in some rapidly delivered notes. It is a restless little bird, difficult to observe. The yellow of the under parts first attracts attention; then a glimpse of its dark back distinguishes it from the female Yellow Warbler, but a sight of the *black crown bordered by the yellow forehead* is necessary for an absolute identification.

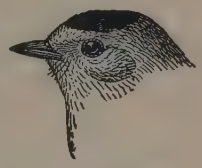


Fig. 9. Wilson's Warbler

Hooded Warbler. *Wilsonia mitrata*

5.67

Ad. ♂. — Forehead and *cheeks bright yellow;* top of head and throat black, inclosing the yellow cheeks; under parts yellow; back brown (olivaceous in strong light); *outer tail-feathers white.* *Ad.* ♀ and *Im.* — The black of the throat absent or inconspicuous.

Nest, in a crotch of a bush or sapling about four feet up. *Eggs,* white, spotted, generally about the larger end, with reddish-brown.

The Hooded Warbler is a summer resident of southern Connecticut and the lower Hudson Valley, arriving early in May and leaving in August. It is locally common along the Sound and in the Connecticut Valley, and in northern New Jersey. At Englewood and at Fort Lee, N. J., it frequents rich swampy woods, feeding either in the undergrowth, or in tall trees. In southern Connecticut it seems to prefer woods with extensive undergrowth of mountain laurel. It is an active bird, and has a loud, bright song. The song varies considerably; in some forms the opening notes have something of the wildness and sweetness of the Field Sparrow's song, and are followed by notes with an upward inflection, suggesting those of the Black and Yellow Warbler. The alarm-note is a sharp *chip.* The male is unmistakable; the female may be known by her yellow forehead and white outer tail-feathers.

Fig. 10. Hooded Warbler

Yellow-breasted Chat. *Icteria virens*

7.44

Ad. — Upper parts brown, tinged with green in strong light; *throat and breast rich yellow,* eyelids, a line over the eye, and another under the cheek white; line from eye to bill black; belly white.

Nest, rather bulky, of coarse grasses, leaves, and strips of bark, low in a thicket. *Eggs*, white, speckled and spotted with reddish-brown.

The Yellow-breasted Chat is a common summer resident of southern Connecticut and the lower Hudson Valley; in southern Rhode Island it is locally common; northward it becomes rare, and though found sparingly in the valleys of Berkshire County, Mass., and rather commonly at Swampscott, Mass., it does not seem to breed north of the latter State. The Chat arrives in May and leaves in August. Its favorite haunts are tangled briery thickets, or thick bushes in clearings. Here it soon makes its presence known by its loud calls. These are of astonishing variety, and sometimes absurdly grotesque. When uttering them the bird is often concealed in the thicket; at such a time he frequently utters his notes with such modulations and in such different keys that he seems now close at hand, and now far away. When singing on a limb, he turns with an air of ludicrous gravity from side to side, and in the height of the breeding season dances jerkily in the air with outstretched legs. The commoner calls are a loud *tŏo tŏo tŏo*, resembling somewhat the song of the White-bellied Nuthatch, a whistled *whit*, and various clucking and mewing sounds.

Northern Yellow-throat; Maryland Yellow-throat. *Geothlypis trichas brachidactyla*

5.33

Ad. ♂. — Upper parts deep olive-green in strong light; forehead and *broad line through eye black*, bordered above by ashy gray; *throat and breast bright yellow;* belly yellowish. *Ad.* ♀. — Without the black or ashy lines; throat and breast yellowish; belly whitish.

Nest, on the ground or in a tussock, a deep structure of leaves and grasses. *Eggs*, speckled with brown at the larger end.

The Northern Yellow-throat (known formerly as the Maryland Yellow-throat) is a common summer resident of all New England and New York, arriving early in May and staying till October. In southern New England it is largely confined to swampy thickets, or the bushy borders of streams; but farther north, where the upland is ill-drained, it is common in the roadside bushes, even on the hills. Its mask of black, like a domino, contrasting with its bright yellow throat, its nervous actions, twitchings of the tail, and manner of climbing up the stalks of reeds or twigs, all serve to call attention to it and to fix its appearance in the mind.

FIG. 11. Northern Yellow-throat

The Yellow-throat's song is loud and emphatic and attracts attention. It varies in different localities, but the same form is generally used by birds of one region; there are dialects, in other words. Three common forms are, (a) *wee'-see-see, wee'-see-see, wee'-see-see,* (b) *wee-see'-ser, wee-see'-ser, wee-see'-ser,* and (c) *wee-see-see'-see, wee-see-see'-see, wee-see-see'-see.* At intervals the male mounts a short distance into the air, and while descending utters a series of *chips,* followed by a bit of the ordinary song. The call-note is a rather loud *tchek;* the bird has also a rapid, rather wren-like chatter; in fact, its form and many of its actions suggest a wren, but no wren shows yellow anywhere.

The female, though less conspicuous, may be distinguished from other small yellow-throated birds by the low, wet situation where she is found, and by her nervous ways. No Pine Warbler would be found in the places which she frequents; the occasional Nashville Warbler or female Yellow Warbler that might occur there would be yellow or yellowish on the belly, as well as on the throat.

Mourning Warbler. *Geothlypis philadelphia*

5.63

Ad. ♂. — Head and neck bluish-gray, mixed with black on the throat; *breast black;* back, wings, and tail brown, tinged with green in strong light; *belly bright yellow.* ♀. — Head, neck, and breast brown, or brownish-gray; back, wings, tail, and belly as in ♂.

Nest, on or near the ground. *Eggs,* white, spotted with brown or reddish-brown.

The Mourning Warbler is a rare migrant through southern and central New England and the Hudson Valley, occurring late in May or early in June. In migration, the bird frequents dry, bushy banks. On Mount Greylock in Massachusetts, on the higher Catskills, and from central Vermont and New Hampshire northward, the bird is a somewhat local summer resident, nowhere very common. It frequents clearings and burnt tracts, where in the thickets of mountain maple under fallen trees it searches for food, or utters its rather striking song. It also sings from the tops of small trees, and occasionally delivers an outburst in the air. The song may be written *thurree, thurree, thurree,* generally followed by two or three lower notes. Whether the accent is on the first or second syllable is hard to tell, but a throaty quality, and the presence of the letter *r,* characterize the song, and a glance at the gray, black, and yellow of the singer identifies him at once.

Connecticut Warbler. *Geothlypis agilis*

5.40

Ad. ♂. — Head, neck, and upper breast ash-gray; ring around eye white; back, wings, and tail brown, tinged with greenish-yellow in strong light; *belly bright yellow. Ad.* ♀ and *Im.* — Upper parts, wings, and tail brown, tinged with greenish-yellow in strong light; *throat and upper breast brownish;* rest of under parts yellow; ring around eye brownish-white.

The Connecticut Warbler is a rare *fall* migrant through New England and the Hudson Valley, occurring in the latter

half of September and in early October. In the swamps about Fresh Pond in Cambridge, Mass., it is sometimes common. In such places it feeds in the jewel-weed (*Impatiens*), great masses of which grow in the wet soil. In western Massachusetts it occurs in rather dry lanes. It is more leisurely in its behavior than its relative the Northern or Maryland Yellow-throat, and when disturbed often flies to some low limb near by, where it sits quietly. An adult in full plumage is rare, but the bird may always be distinguished from the female Northern Yellow-throat by its throat, which is brownish where the other species is yellow, and by its *bright yellow under parts*. If the bird is seen at close range, a whitish eye-ring is visible.

Kentucky Warbler. *Geothlypis formosa*

5.40

Ad. ♂. — Crown and stripe from bill along side of throat black; *line over eye* and under parts *bright yellow;* back, wings, and tail brown, tinged with greenish-yellow in strong light. *Ad.* ♀. — Similar, but the black veiled with gray.

Nest, of dried leaves on the ground. *Eggs*, white, spotted with brown or reddish-brown.

The Kentucky Warbler is a rather common, though local, summer resident of the lower Hudson Valley as far north as Sing Sing. It arrives early in May and leaves late in August. It frequents low damp woods, spending most of its time on or near the ground. Its song is loud and bright, and resembles the syllables *tweedle, tweedle, tweedle*. The Northern Yellow-throat has been taken for the Kentucky Warbler; the *yellow* line *over* the *eye* is the distinguishing mark of the latter.

Fig. 12. Kentucky Warbler

Louisiana Water-thrush. *Seiurus motacilla*

6.28

Ad. — Upper parts grayish-brown; line over the eye *pure* white; under parts white, tinged in strong light with buffy; *throat unspotted;* breast and flanks streaked with black.

Nest, placed under the bank of a stream or under the roots of an overturned tree. *Eggs,* white, spotted with reddish-brown.

The Louisiana Water-thrush is a summer resident of Berkshire County, Mass., of Rhode Island, Connecticut, and the lower Hudson Valley. It is rare in Berkshire County, local in Rhode Island and northern Connecticut, but fairly common in southern Connecticut and along the Hudson; it even penetrates the Catskills, following the mountain streams. It arrives in the middle of April, often a fortnight before the northern species, and leaves before September. Though it does to some extent frequent swampy woods and sluggish woodland streams, as at Englewood, N. J., yet its favorite haunts are clear mountain brooks, where it trips over the stones, or utters its wild ringing song from the branches of the overhanging trees. Like its relative, it has a habit of wagging the tail as it walks.

During May, both the northern and the southern species occur in southern New England and the Hudson Valley. The southern species may then be distinguished by the *pure white line over the eye* and by the *unspotted throat.* Its song, generally described as wilder than that of the northern species, and the call-note, may both be distinguished by a practiced ear, but a beginner must depend for identification either on the time of year, or on the white line over the eye and the unspotted throat. A Water-thrush seen in southern New England or New York between the tenth of June and the first of August will, almost undoubtedly, be the southern species. (See following species.)

Water-thrush. *Seiurus noveboracensis*

6.04

Ad. — Upper parts dark brown; line over the eye whitish, *buffy in a strong light;* under parts buffy; everywhere spotted with black.

Nest, on or near the ground. *Eggs*, white, spotted with reddish-brown.

The Water-thrush is a common migrant through southern and central New York and New England during May, and again in August and September. From central New Hampshire, through northern Maine, and in the Adirondacks, it is a summer resident, frequenting the swampy edges of lakes, swampy woods, or the pools in mountain streams. In migration it may be found in any low, wet ground, under trees or bushes, picking its way along the edges of the water, constantly wagging its tail. Its song is loud and clear and may be represented by the syllables *twit twit twit twee twee twee⁀oo*, all very staccato, and the last notes going down the scale. The call-note is a clear, metallic *chip*. (See preceding species.)

Oven-bird. *Seiurus aurocapillus*

6.17

Ad. — Upper parts brown; *crown dull orange*, edged with black; breast and sides spotted with black.

Nest, a bulky structure of dry leaves and stalks, on the ground, with the opening at the side. *Eggs*, white, spotted with reddish-brown.

The Oven-bird is a common summer resident throughout New England and New York, arriving early in May and lingering through September. It inhabits woodland of every sort, if there are open spaces under the trees where it may walk over the ground in search of food. It prefers, however, dry open woods of deciduous trees. Here its loud song, *Teacher*, Teacher, TEACHER, *TEACH*, to modify Mr. Burroughs's version, is one of the first sounds to attract

the ear. When uttering it, the bird is generally perched on a rather high limb, but at other times it *walks* with pinkish feet over the dry leaves or along some low limb, with a constant upward tilt of the tail. Towards evening and at intervals during the night, one is surprised, while walking in or near woodland, by a burst of rather rapid music from a bird high overhead, and as he shoots earthward a few phrases remind one of the *teacher teach* of the Oven-bird. This is the famous flight-song of the Oven-bird, not rare, but rarely heard, unless one happen to live in the very woods. Its alarm-note is a vigorous *tschuk*. When the brooding female is frightened off the nest, she tries to draw the intruder away from the spot by fluttering helplessly along the ground, trailing behind her an apparently broken wing.

FIG. 13. Oven-bird

PRAIRIE WARBLER. *Dendroica discolor*

4.75

Ad. ♂. — Upper parts with a strong greenish tinge, when seen in strong light; when the bird is seen from above, reddish-brown markings show in the middle of the back; forehead, a line over eye, and a spot below eye yellow; spot in front of eye and stripe below eye black; wing-bars yellowish; *breast bright yellow* with *black streaks down the sides*. *Ad.* ♀. — With less, sometimes no reddish-brown on the back. *Im.* — Upper parts olive-green; under parts yellow; no wing-bars.

Nest, in a bush or low tree, generally lined with horse-hair. *Eggs*, white, speckled with dark brown, chiefly about the larger end.

The Prairie Warbler is a summer resident of southern New England and Long Island, but is rare in northern New Jersey and in the lower Hudson Valley; it is not found north of Massachusetts, except in a few stations in the Merrimac Valley, nor does it occur, so far as I know,

in the interior of the State. It is found in dry, scrubby second-growth, especially on sandy soil. It is abundant on Martha's Vineyard and on parts of Cape Cod, but rare or only locally common over most of its range. It arrives early in May, and leaves in September.

The Prairie Warbler's song is a series of sharp, thin notes running rapidly up the scale. They may be distinguished from the Parula's notes by their thinness; the Parula's voice is wheezy, nor would it be often heard in the hot, dry situations in which the Prairie Warbler delights.

Fig. 14. Prairie Warbler

The Canada Warbler (p. 100), the Black and Yellow (p. 118), and the rare Cape May also have yellow under parts streaked with black. Only in the Prairie Warbler, however, is the black confined to the *sides*. The Canada Warbler, moreover, chooses low, wet places, even on migration, and in summer the breeding areas of the two birds hardly overlap.

Yellow Palm Warbler; Yellow Redpoll. *Dendroica palmarum hypochrysea*

5.43

Ad. in spring. — Crown chestnut; back brownish; under parts bright yellow; sides of throat, breast, and sides of belly streaked with reddish-brown; no white wing-bars. *Ad. in fall* and *Im.* — Crown-patch concealed; under parts as above.

Nest, on the ground. *Eggs*, buffy white, speckled with brown.

The Yellow Palm Warbler or Yellow Redpoll is a migrant through New England and New York, appearing in April and early May, and again in September and early October. It breeds sparingly in open juniper-bogs in northern and eastern Maine (Knight). In spring it is a bird of stone walls, bushes, and low trees, feeding often on the

ground. Its song resembles that of the Chipping Sparrow, but is less strong even than that simple performance. It is often associated in migration with the Yellow-rumped Warbler; the songs of the two Warblers are both rather feeble, but the Yellow Redpoll's is rougher and less likely to rise or fall into a different key.

The Yellow Palm Warbler has in spring a chestnut crown, like that of a Chipping Sparrow, but its bright yellow under parts distinguish it, of course, from that bird. It has, moreover, a trick of constantly *wagging* its tail up and down; this habit distinguishes it readily from the two other warblers with yellow under parts, the Nashville and the Yellow Warbler. (See also the account of the Blackpoll Warbler in autumn, p. 116.)

Palm Warbler. *Dendroica palmarum*

5.25

The Western Palm Warbler is a regular, though rare, migrant in the latter half of September, generally appearing earlier than the preceding species. Its habits and haunts are similar to those of the Yellow Palm Warbler, and it takes a trained eye to distinguish between the two. Its breast, throat, and upper belly are all dingy whitish, only the extreme lower belly and the feathers under the tail are bright yellow. The eastern bird is yellow over the entire under parts.

Pine Warbler. *Dendroica vigorsii*

5.52

Ad. ♂. — Upper parts with a strong greenish-yellow tinge in a good light; wing-bars whitish; *throat and breast yellow*, brightest on the throat; belly paler. *Ad.* ♀. — Upper parts brownish with fainter greenish-yellow tinge; under parts grayish-white with a faint tinge of yellowish on the breast; wing-bars narrower, grayish. *Im.* — Similar to ♀, but without any yellowish tinge; wing-bars very faint.

Nest, generally in pines, from twenty to fifty feet up. *Eggs*, dull white, spotted with brown, chiefly about the larger end.

The Pine Warbler is a common summer resident of central New England and of parts of Long Island; in northern New Jersey, the lower Hudson Valley, and in southern Connecticut it occurs only as a migrant. In the valleys of the Housatonic, Connecticut, and Merrimac, and in southern Maine it is found as far north as the pitch pine grows, but it also occurs sparingly near its northern limit in groves of tall white pine. It is the first warbler to arrive in spring, appearing early in April, and it lingers till the middle of October, singing freely again toward the end of its stay. In the spring, the bird often descends to the ground to feed, and it may in any case be more easily observed in the loose growing pitch pines than the equally common Black-throated Green Warbler in the dense white pines. The movements of the Pine Warbler are leisurely, and it stops continually to shake out the sweet trill which constitutes its song.

The song resembles in form the Chipping Sparrow's and the Snowbird's, but is sweeter and less staccato than either of these songs; moreover, it is rarely heard outside of a pine grove. At the height of the breeding season the trill is occasionally followed by a few additional notes in a lower key.

The resemblance of the Pine Warbler in pattern of coloration to the Yellow-throated Vireo is discussed on p. 134. The dull colors of the female Pine Warbler make her one of the most difficult birds to recognize; the faint tinge of yellow on the breast is perceptible only at close range in good light, and the wing-bars are narrow and grayish. The shape of the bill, of course, indicates that she is a warbler; it is often only by a process of elimination that one discovers her identity. The young birds in autumn are even more non-committal.

Black-throated Green Warbler. *Dendroica virens*

5.10

Ad. ♂. — Back greenish in strong light; wing-bars broad, white; *cheeks* and forehead *yellow; middle of throat, upper breast,* and *sides black;* belly white, running up into the black area. *Ad.* ♀. — The yellow cheeks duller, tinged with greenish; black throat almost obscured with gray; wing-bars white. *Im.* — Showing hardly any black on the throat.

Nest, from fifteen to fifty feet up in coniferous trees.

The Black-throated Green Warbler is a common summer resident of most of New York and New England; in northern New Jersey, the lower Hudson Valley, and southwestern Connecticut it occurs only as a migrant. It arrives late in April or early in May; northern individuals occur in September and early October in the mixed flocks of migrating warblers. It is the chief inhabitant of the white pines, where one hears continually its wheezy notes. It is also a common resident of the red cedar or savin groves of southern New England and of the spruces of northern New England and New York. In migration it is common in deciduous trees.

Fig. 15. Black-throated Green Warbler

The song of this warbler has two forms, one quicker than the other; they may be written *zēē zēē zu zi* and *zi zi zi zi zee′zu zi.* When a male is singing freely, he often keeps up a chipping note through the short intervals between the repetitions of his song.

The bird is seldom clearly seen, though its notes are so constant, but as it comes to the end of a twig, one gets from below a glimpse of the *bright yellow cheeks,* the *black throat,* and the entering angle of white between the *black sides.* The only other small bird with a black throat and yellow about the head is the Golden-winged Warbler. In

this species the cheeks are clear black and white and only the top of the head is yellow; the black throat, too, covers only a small area, not extending down the sides, nor is the Golden-winged Warbler found in pines. (See Fig. 22, p. 127.) The songs of the two species and of the Black-throated Blue have something of the same quality of tone, but differ decidedly in form. The Black-throated Blue utters three notes, the last two drawled, and generally with a rising inflection. The song of the Golden-winged Warbler may be written *zēē zee-zee-zee*, the first note long, the next three a bit lower and quicker.

Blackburnian Warbler. *Dendroica blackburniæ*

5.25

Ad. ♂. — Crown and line under eye black; back black, streaked with gray; wide bar on wing white; *throat, breast,* and *line over eye* bright *reddish-orange;* sides of breast streaked with black; belly whitish. *Ad.* ♀. — Similar, but duller, yellow replacing the orange. *Im.* — Similar to the female; the back browner, the yellow paler.

Nest, in evergreen trees, from ten to forty feet up. *Eggs,* greenish-white, speckled or spotted, chiefly about the larger end, with reddish-brown.

The Blackburnian Warbler is a migrant through southern New England and the Hudson Valley, in May and September, rare in eastern New England, but fairly common in western New England and in the Hudson Valley. It breeds from the edge of the Canadian Zone northward, locally in deep hemlocks or pine woods at the southern border of its range, commonly in the coniferous forests of the north.

The song of the Blackburnian Warbler is characterized by its extreme thinness; one form resembles a very wiry Redstart's song, but the commoner form, by which the bird may always be recognized, may be described by the syllables *wee, see, see, see, zĭ, zĭ, zĭ,* ending in the thinnest note imaginable. The singer is generally feeding high in thick ever-

greens, and it is only now and then, when he comes out to the tip of a twig, that his splendid color is visible. If seen, it can never be mistaken or forgotten. The deep *orange* of the *throat* and *breast* is unlike the color of any other small bird, except the Redstart, where the orange is on the sides of the breast and the throat is black. The female and young may be known by the suggestion of *buff in the yellow throat*, and by the white wing-patch.

Black-poll Warbler. *Dendroica striata*

5.56

Ad. ♂. — *Crown black;* back gray, streaked with black; wing-bars white; cheeks white; under parts white, the sides streaked with black. *Ad.* ♀. — Upper parts gray, showing black streaks and a greenish tinge in strong light; wing-bars white; sides streaked with dull black. *Ad. in winter* and *Im.* — Similar to the female, but more *yellowish below*, and the streaking on the back and under parts very faint.

Nest, in evergreens, about six feet up. *Eggs*, white, speckled and blotched at the larger end with brown.

In most of New England and New York the Black-poll Warbler is a very common migrant in the second half of May, and in September and early October. On the mountains of northern New York and New England it is a common summer resident, occurring most commonly in the stunted spruces at the edge of the timber line.

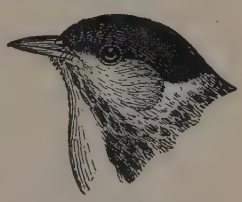


Fig. 16. Black-poll Warbler

The song of the Black-poll is constantly heard from the migrants in May; it is a high thin *tsit tsit tsit tsit tsit*, of a penetrating quality, delivered with a crescendo and diminuendo; the last notes are by some birds run rapidly together with almost a sputtering effect. The alarm-note is a strong *chip*.

The call-note is a rather rough lisp; it is constantly heard from the trees in autumn, and is the sound heard most frequently at night as the birds migrate southward.

The male Black-poll Warbler may be told from the Black and White Warbler (see Fig. 25, p. 129) by its *plain black cap*, and by its very different manner of feeding. The former hops from one small twig to another, while the latter climbs along the large limbs in the manner described on p. 129. The female is harder to identify; one must look for the white wing-bars and the dull streaking along the sides. In the fall the young Black-polls and the adults in winter plumage are very abundant and should be looked for and carefully studied. Their upper parts have a greenish tinge when seen in strong light; they are *yellowish below* and have white wing-bars. They have a way of twitching their tails, but it is a slight nervous action, different from the deliberate sweep of the Yellow Red-poll. (See also next species.)

Bay-breasted Warbler. *Dendroica castanea*

5.63

Ad. ♂. — Top of head chestnut, bordered in front and on the side with black; back streaked with black; *throat, breast, and sides chestnut;* sides of neck and rest of under parts buffy; wing-bars white. *Ad.* ♀. — Upper parts olive, streaked with black; under parts buffy; sides of breast tinged with reddish-brown. *Im.* ♂. — Similar to *ad.* ♀; flanks with a tinge of reddish-brown. *Im.* ♀. — Upper parts olive-green, usually unstreaked; flanks usually without tinge of reddish-brown; under parts buffy.

Nest, in coniferous trees, fifteen to twenty feet from the ground. *Eggs,* white, tinged with greenish, and finely speckled about the larger end with brown.

The Bay-breasted Warbler, as a migrant, is not uncommon in the Hudson Valley and in western Massachusetts, but is generally very rare in eastern New England, where it occurs, as a rule, only when there is an unusually heavy

migration of warblers. It passes north in the middle of May and returns in September. It breeds commonly on the high mountains of northern New England and in the extensive coniferous forests of northern and eastern Maine. The song of the Bay-breast suggests somewhat that of the Black and White Warbler, or the short form of the Redstart's song.

This is the only warbler that has a *chestnut crown, throat, breast,* and *sides;* the Yellow Redpoll has a chestnut crown and slight streaking of chestnut on its yellow under parts; the Chestnut-side has a narrow stripe of chestnut along the sides, but a yellow crown and a white throat. In September a few Bay-breasts pass through eastern Massachusetts, and a larger number through the Hudson Valley. They now resemble the immature Black-poll Warblers so closely that only a trained eye can distinguish them. The buffy tinge over the under parts, the buffy *under tail-coverts,* and occasionally the tinge of reddish-brown along the sides are their distinguishing marks.

CHESTNUT-SIDED WARBLER. *Dendroica pensylvanica*

5.14

Ad. ♂. — *Top of head yellow;* back in strong light of a greenish tinge, streaked with black; wing-bars yellowish; cheeks white; sides of throat black; a narrow *stripe* of *chestnut-red* along the *sides of breast and belly. Ad.* ♀. — Similar, but duller. *Im.* — Entire upper parts yellowish-green; wing-bars yellowish; under parts white.

Nest, in a low, slight bush, often a blackberry or a raspberry. *Eggs,* white, speckled, chiefly about the larger end, with reddish-brown.

The Chestnut-sided Warbler is a common summer resident of New York and New England, but is less common in the lower Hudson Valley than farther north. It arrives early in May and stays till the end of September. It prefers dry roadside thickets or clearings, and though its song

closely resembles that of the Yellow Warbler, the two species are so rarely found breeding in the same kind of country that one will not often confuse their songs. The singer in the dry scrubby thickets is nearly always the Chestnut-side, while the bird of the streams and cultivated land is the Yellow Warbler.

FIG. 17. Chestnut-sided Warbler

Each of these two warblers commonly has two quite distinct songs, one strong and incisive, the other feebler and less piercing. The sharp incisive song of the Chestnut-side ends with a phrase which has suggested the rendering, *Very, very glad to meet you.* The loose or feeble song has so little character that it is hard to learn.

The *yellow crown* of this bird, and the white throat, breast, and belly make it easy to recognize, even if the *narrow line of chestnut* is not at first seen. The yellowish wing-bars of the young, and their greenish-yellow backs, and white, unstreaked under parts, distinguish them from other young warblers.

MAGNOLIA WARBLER; BLACK AND YELLOW WARBLER.
Dendroica maculosa

5.12

Ad. ♂. — *Head ashy;* cheeks and back black; large patch of white on the wing; all the *tail-feathers tipped with black* for some distance, all but the central ones white above the tips; rump yellow; *under parts yellow; breast and sides* heavily *streaked with black. Ad.* ♀. — Similar, but duller. *Im.* — Upper parts gray; back greenish in strong light; rump and under parts yellow; tail as in adult.

Nest, from three to six feet up, in coniferous trees. *Eggs,* white, marked with brown at the larger end.

The Black and Yellow Warbler is a migrant through southern New York and New England, common in western

New England and in the Hudson Valley, fairly common in eastern New England. It arrives about the tenth of May, passes north before the end of that month, and returns in September, and early October. On migration the Black and Yellow seems to prefer evergreens, but when abundant, it is found in all suitable places. It is a common summer resident in the Canadian Zone, from the edge of the spruce belt northward. It delights in the pasture spruces, the thick growth of healthy young trees, whose lower branches sweep the hillsides; but it will live in almost any growth that contains spruce, even high up the mountain-sides.

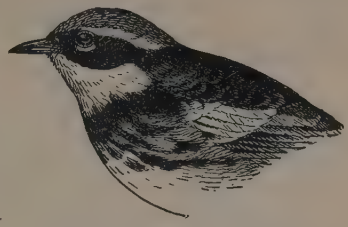


FIG. 18. Magnolia Warbler

The song is as characteristic a sound of the smaller patches of spruce as that of the Yellow-rump is of the more extensive tracts. Generally it suggests the syllables *weely, weely, wichy*, with a rising inflection at the close, but there are several variations, which can be learned only after long practice. The song generally has more character than that of the Yellow-rump. The alarm-note is a rather sharp *chip;* the bird has other short notes, one of which is a *tizic*, resembling the song of the Yellow-bellied Flycatcher, but thinner and drier (F. H. Allen).

The Prairie, the Canada, and the Cape May are the other warblers whose yellow under parts are streaked with black. Neither the Prairie nor the Canada shows white on the wing: the Prairie has no ashy-gray or black on the upper parts; the Canada has no white in the tail. A study, too, of Figs. 14 and 8 on pp. 110 and 100, will show the difference in the pattern of black and yellow. The much rarer Cape May, which, like the Black and Yellow, has a yellow rump and white on the wing, may be distinguished

by the black crown. In all plumages the *tail* of the Black and Yellow is a good field-mark ; even when closed it shows white halfway down, and *extensive black tips.*

Myrtle Warbler ; Yellow-rumped Warbler. *Dendroica coronata*

5.65

Ad. ♂. — Upper parts gray, with a bluish tinge in strong light ; *rump* and small crown-patch *yellow ;* wing bars white ; cheeks black ; throat white ; *sides of upper breast black,* of lower breast yellow ; belly white ; three outer tail-feathers with large white spots. *Ad.* ♀. — Upper parts browner ; less black below. *Ad. in winter* and *Im.* — Yellow crown-patch partly hidden by brownish ; back brownish ; breast washed with brownish ; *rump yellow ;* outer tail-feathers spotted with white.

Nest, in coniferous trees, five to ten feet up. *Eggs,* grayish white, spotted with brown.

The Yellow-rumped Warbler is the only member of its family which winters in New York and New England ; it is found in winter from Ipswich, Mass., southward along the sea-coast wherever bayberries are abundant. It has even been found at Pine Point, Scarboro, Me., in January. Early in April the Yellow-rump appears as a migrant, and early in May it becomes abundant. A few migrants occasionally reappear late in August, but the great host, now in their winter plumage, pass through late in September and through October. It breeds commonly in the extensive spruce forests of northern New York and New England ; sparingly in Worcester and Berkshire counties, Mass., and here and there on the upland of southern

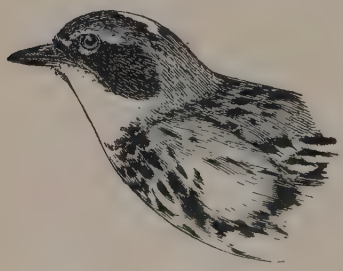


Fig. 19. Myrtle Warbler

New Hampshire and Vermont, wherever there are patches of spruce; in the southern part of its range it breeds occasionally in white pine groves.

The song is difficult to learn; it generally consists of two sets of phrases composed of the syllables *wee-see-see'-see*, the second sometimes in a lower, sometimes in a higher key than the first, but neither of them at all sharp or decided. In spring it gleans insects from the twigs of trees, or flies out from the branches to catch the little winged creatures that swarm at this season; its yellow rump is now often hard to see, but the bird may be recognized, if seen from below, by the large black patches on the breast and the yellow patches lower down. Note also its *white throat;* it is the only white-throated warbler, except the Chestnut-side, that has any yellow in its plumage. In winter, when it adds bayberries to its insect fare, it feeds in low bushes; when it flies up, the bright *yellow rump* and the spots of white on the outer tail-feathers make an unfailing field-mark.

Black-throated Blue Warbler. *Dendroica cærulescens*

5.28

Ad. ♂. — Upper parts grayish-blue; a *white patch* in the *wing;* throat, and sides of head, sides of breast, and belly black; rest of breast and belly white. *Ad.* ♀. — Upper parts brownish or grayish, tinged with green in strong light; line over eye dull yellowish-white; white wing-patch smaller than in male; under parts dingy yellowish. *Im.* ♂. — Similar to *ad.* ♂, but upper parts tinged with olive-green, the black somewhat veiled with white. *Im.* ♀. — Similar to *ad.* ♀.

Nest, in a low bush or sapling, often in laurel, hemlock, or yew, two feet or less from the ground. *Eggs,* white, spotted with brown, chiefly at the larger end.

The Black-throated Blue Warbler is a common summer resident of northern New York and New England from

Berkshire County, Mass., northward, and a rather common migrant through southern New England and the lower Hudson Valley, passing north in May, and returning in September and early October. It is less common as a migrant in eastern Massachusetts than in western Massachusetts or in the Hudson Valley. In summer it frequents, in the southern part of its range, cool woods of deciduous trees, — beech, maple, and birch, — where its drawling notes are as characteristic as those of the Black and Yellow Warbler in the spruces.

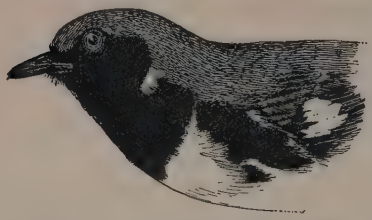


Fig. 20. Black-throated Blue Warbler

The song varies somewhat in form and in length: a common form consists of three rather pure notes with a downward inflection, followed by a fourth, hoarse note with rising inflection, *whee-a whee-a whee-a whee-ee ;* another common form consists of one short introductory note and two upward hoarse notes, the whole given rapidly. The hoarse drawling character of the last notes will always serve to identify the song. The alarm-note is a rather heavy *chuck.*

The male is unmistakable; the female and young are rather puzzling birds, unless one can make out the small white spot on the wing, and the whitish line over the eye.

Yellow Warbler; Summer Yellowbird. *Dendroica æstiva*

5.10

Ad. ♂. — Entire bird yellow or yellowish; the crown in good light bright yellow; the upper parts greenish-yellow; wings and tail brownish; the breast streaked with reddish-brown. *Ad.* ♀. — Like the ♂, but crown not brighter than the back, breast not streaked with reddish-brown.

Nest, a neat gray cup in the fork of a bush or low tree. *Eggs*, bluish-white or greenish-white, spotted with brown, generally in a wreath around the larger end.

The Yellow Warbler is a summer resident of New York and New England, arriving late in April or early in May, and leaving about the middle of August; a few migrants from the north are seen in September. It is common in central and southern New England and in the lower Hudson Valley, and frequents orchards and gardens, even in large cities; in the hilly country of western Massachusetts and in northern New England it is much less common, and is generally confined to the valleys of the large streams and their tributaries. It is active, and a constant singer, uttering its bright song from the morning of its arrival to that of its departure. The song has two forms: one loud and incisive, like the syllables *wee'-chee, chee, chee, chee'-wee*, the other less sharp and strong. (See under Chestnut-sided Warbler, p. 118.) The alarm-note is a rather loud *chip*.

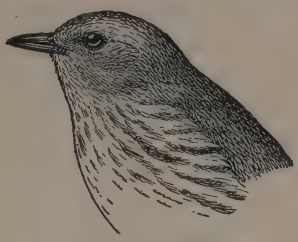


Fig. 21. Yellow Warbler

There is hardly any bird with which the Yellow Warbler can be confused: none of the other warblers is so yellowish above, except the Blue-winged Warbler (see Fig. 23, p. 128); the Goldfinch has black and white wings and tail, and a black forehead. (See, also, p. 126, Nashville Warbler.)

Cape May Warbler. *Dendroica tigrina*

5.00

Ad. ♂. — *Crown blackish; patch back of eye orange-brown* or chestnut; back streaked with black; white patch on the wing; rump yellow; under parts yellow, streaked with black. *Ad.* ♀. — Upper parts gray; rump yellowish; under parts white, tinged with yellowish and streaked with dusky brown; white wing-bar very narrow.

The Cape May Warbler is a very rare migrant through New York and New England, generally occurring only when the other migrating warblers are unusually abundant. It should be looked for in the height of the spring migration, about the middle of May, and again late in August and September. It is probably less rare in western New England, and is reported as tolerably common in the fall at Sing Sing (Chapman). From 1871 to 1875 it bred "really abundantly in the coniferous forests about Lake Umbagog in western Maine" (Brewster), but is now rarely found breeding even in northern New England.

The song resembles the Black-poll's quite closely; it has been described as peculiarly "faint and listless," "a monotonous *zee-zee-zee-zee*," "sometimes with three *zees*, sometimes with four, but always in an unhurried monotone" (Torrey).

A male in spring plumage could be confused only with the Black and Yellow Warbler, from which its *black crown* and *orange-brown ear-coverts* should distinguish it.

Northern Parula Warbler. *Compsothlypis americana usneæ*

4.73

Ad. ♂. — Upper parts and sides of head *grayish-blue*, with a patch of greenish-yellow in the middle of the back; *wing-bars white;* throat and breast yellow, washed across the upper breast with chocolate-brown; belly white. *Ad.* ♀. — Upper parts as in male; breast without the brown band.

Nest, of usnea, generally in a pendent bunch of the same moss. *Eggs*, white, speckled with reddish-brown about the larger end.

The Parula Warbler breeds in swamps or deep moist woods, wherever the trees are hung with the long gray usnea moss. It is, therefore, found in summer in the white cedar swamps of Cape Cod, southern Rhode Island, and Connecticut, and throughout the damp forests of Berkshire County,

Mass., and northern New York and New England. In the vicinity of New York city, however, and throughout most of southern New England, including the neighborhood of Boston, it occurs chiefly as a migrant. It is often very common throughout May, and again in late September and early October. It may then be seen wherever migrating warblers are found, — in the village streets, about houses, and along the edges of streams or swamps. It generally keeps well up in the tops of trees, where it often clings like a Chickadee to the ends of small twigs.

Like many of our other warblers the Parula has two songs: one is easy to learn, a series of *zee*-like notes, which rise quickly and end in a little *zip*, as if one were winding up a little watch; the other, though of a less distinctive form, has the same hoarse quality.

This is our smallest warbler, and should be confused with no other bird, if one can get a view of the *bluish head*, the yellow throat, and *white wing-bars*.

Tennessee Warbler. *Helminthophila peregrina*

5.00

Ad. ♂. — Top of head ash-gray; rest of upper parts olive-green; under parts white. *Ad.* ♀. — Similar, but top of head tinged with greenish; under parts washed with yellowish.

The Tennessee Warbler is a migrant through New York and New England, in May and September; it is usually very rare, though sometimes common in the autumn in the lower Hudson Valley. On migration it frequents apple orchards and tall woodland trees, but in northern New England, where it breeds sparingly, it frequents larch swamps and occasionally spruce growth. On account of its lack of bright colors it is the least likely of the rare warblers to come under the notice of any but an expert field ornithologist. Its song is a series of sharp *sit's*, like a Black-poll's,

but with a decided change to a higher pitch in the middle and a fall at the close. But for the sharp slender bill and the smaller size the bird might pass for a Red-eyed Vireo, until its song betrayed it.

Nashville Warbler. *Helminthophila rubricapilla*

4.77

Ad. — *Top of head ashy*, with a chestnut crown-patch somewhat hidden; rest of upper parts brown, tinged with greenish in strong light; *under parts bright yellow;* ring around eye white or yellowish-white. *Im.* — Similar, but head like back; under parts not so bright.

Nest, on the ground. *Eggs*, white, speckled with reddish-brown, chiefly at the larger end.

The Nashville Warbler is a common summer resident of portions of New York and New England. It is rare or absent in the neighborhood of New York city, except as a migrant, but breeds from Highland Falls northward. In Connecticut it is generally distributed, but is not common in the southern part of the State. In the upland of central and northern New England it is common. It arrives early in May, and leaves in September. It frequents land which is partially overgrown with small trees and bushes, and as it is one of the most active of an active family, it often leads a student a very long chase before he gets a glimpse of its ashy head and yellow under parts. Its song, however, is very characteristic. It begins like a Black and White Warbler's, or a Redstart's, and ends with two or three quick phrases that run down the scale, *wee-tse wee-tse wee-tse, chiddle chiddle chiddle.* Occasionally the ending is omitted, leaving a puzzling beginning which is hard to tell from a Redstart's song.

The chestnut crown-patch of the Nashville is often difficult to make out, but no other warbler has *bright yellow* unstreaked under parts and an *ashy head.* The white eye-ring, too, is diagnostic, if one can get a view of it. The

Connecticut Warbler, which occurs only in the fall, also has a whitish eye-ring, but its throat is not yellow.

GOLDEN-WINGED WARBLER. *Helminthophila chrysoptera*

5.10

Ad. ♂. — *Crown yellow;* upper parts ashy-gray; wings and tail bluish-gray; patch on wing yellow; *throat* and stripe through eye *black*, separated by a white stripe. *Ad.* ♀. — Black of male replaced by gray.

Nest, on ground. *Eggs*, white, speckled with brown, chiefly about the larger end.

The Golden-winged Warbler is a rather rare and local summer resident of southern New England and eastern New York. No other New England bird has such a restricted range. It is rare in the Hudson Valley, has been found in New Hampshire only in the Lower Merrimac Valley, and not at all in the interior of Massachusetts, unless in the Connecticut Valley near Springfield. It is not rare in eastern Massachusetts, but is uncommon in Rhode Island and southern Connecticut. It arrives in May, and leaves in August. It frequents dry woodland, particularly near open bush-grown pastures. Its song, though like that of the Black-throated Green Warbler in its wheezy quality, differs decidedly in form (see pp. 113, 114).

FIG. 22. Golden-winged Warbler

BLUE-WINGED WARBLER. *Helminthophila pinus*

4.80

Ad. ♂. — Crown bright yellow; back and rump bright olive-green in strong light; *a narrow black line through the eye;* wings and tail bluish-gray; wing-bars white or yellowish-white; outer

tail-feathers showing white when spread; under parts bright yellow. *Ad.* ♀. — Similar, but yellow of head restricted to the forehead; under parts duller.

Nest, on the ground. *Eggs*, white, thinly speckled with reddish-brown.

The Blue-Winged Warbler does not occur north of southern Connecticut and the Lower Hudson Valley, but in most of this region it is fairly common. It arrives early in May and leaves early in September. It is found in dry bushy fields, on the edges of woodland, and sometimes even in swampy growth. It is not so active as many of the warblers, and gleans its food leisurely among the branches of trees. Its song is characteristic; the syllables *zwee-churr*, both notes drawled, represent the ordinary song. It occasionally utters a longer, more complicated series of notes. From the Yellow Warbler it may readily be distinguished by its gray wings and by the *black line* from *the bill through the eye*.

Fig. 23. Blue-winged Warbler

Worm-eating Warbler. *Helmitheros vermivorus*

5.51

Ad. — Head with *four black lines*, two through the eyes, and two on the top of the head, separated by buffy lines; back olive green in strong light; throat buffy; breast and belly whitish.

Nest, on ground, always with the heads of a common moss, *Polytrichum*, in the lining. *Eggs*, white, spotted with reddish-brown.

The Worm-eating Warbler is a regular, but not very common, summer resident of the lower Hudson Valley, is locally common in northern New Jersey, and occurs locally in southern Connecticut. It arrives in May and leaves in August. It is a bird either of dry wooded banks, or of

swampy thickets, where it feeds either on the ground or in the trees, gleaning among the twigs, or flying up to a bunch of dried leaves to pick off an insect. Its song is almost exactly like that of a Chipping Sparrow; in fact, if one hears in dry woodland in the region above defined what seems to be a Chipping Sparrow singing perhaps a bit faster than the average, the song should be followed to its source, and the singer scrutinized. The clearly defined contrasting colors of its head give it a trim appearance, and make it easy to identify.

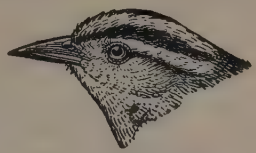


Fig. 24. Worm-eating Warbler

Black and White Warbler. *Mniotilta varia*

5.30

Ad. ♂. — Streaked everywhere, except on the throat and belly, with black and white; a broad *streak of white* through the *middle of the black crown*. *Ad.* ♀. — Upper parts streaked with brownish-black and white; under parts white, with obscure streakings on the sides; bill slender, slightly curved.

Nest, on the ground; generally in a depression. *Eggs*, white with brown spots on the larger end.

The Black and White Warbler, or Black and White Creeper, as it was formerly called, is a common summer resident of most of New York and New England, becoming less common in the northern portion of the region and infrequent in the deep northern forests. It arrives in the latter part of April, and leaves in September. It is found in woodland, particularly where trees and bushes grow near open spaces. Here the bird may be seen following each large limb to its extremity, peering now over one side, now over the other, searching for the insects even on the under side.

Fig. 25. Black and White Warbler

When singing, the male sits on a twig, his long bill open, uttering again and again the thin, wiry notes which constitute his song, *wee-see'*, *wee-see'*, *wee-see'*, *wee-see'*. In the height of the breeding season there is often an intermediate portion of the song in a lower key. Both birds utter a chattering note when excited, but I have never heard the great variety of notes which has been attributed to this species. After a period of silence in early August, the song may occasionally be heard again.

The Black and White Warbler may possibly be confused with the Black-poll Warbler in spring, or with the Downy Woodpecker. From the former, its manner of feeding and the broad white stripe through its crown should distinguish it (see Fig. 16, p. 115); from the latter it may be distinguished by its smaller size, slender bill, and by the absence of a broad white stripe down the back (see Fig. 16, p. 115). In strong light the contrast of the lustrous black and the white gives the male almost a bluish look.

VIREOS: FAMILY VIREONIDÆ

Four Vireos occur in summer in nearly all southern New York and New England, and another species passes through as a migrant. In northern New York and New England, especially in the upland, only two are common. The Red-eyed Vireo is universally distributed; it occurs wherever there are trees. The White-eyed Vireo breeds commonly in low thickets as far north as southern Rhode Island and Connecticut, and rarely in eastern Massachusetts. The Yellow-throated and Warbling Vireos are birds of the shade trees in village streets, or tall trees in groves or along streams. The Solitary Vireo occurs in summer in the cool northern woods, and as a migrant in the rest of New York and New England. The Vireos feed in trees, hopping and flying from one twig to another, keeping in fairly constant

motion, but in a leisurely fashion. They are stouter than warblers and their tails are shorter in proportion to their length. They are unwearying singers, the Red-eye alone furnishing a large proportion of the woodland chorus. All the Vireos come down to the ground on occasions, for instance to pick up nesting material, but as a rule only the White-eye comes habitually below a line ten feet above the ground; the Red-eye and Solitary vary from ten to thirty; the Yellow-throat between twenty and thirty; the Warbling between thirty and sixty. All but the Yellow-throat are chiefly gray in color. All the Vireos build neat, cup-shaped nests, hung generally from a forked twig.

White-eyed Vireo. *Vireo noveboracensis*

5.27

Ad. — Upper parts greenish-yellow in strong light; throat grayish-white; *line from bill to and around eye yellow;* sides and belly very yellow; wing-bars yellowish; iris white, visible at a greater distance than the red iris of the Red-eyed Vireo.

Nest, a cup hung from a fork in a low horizontal bough, sometimes from a vine. *Eggs*, like the Red-eye's.

The White-eyed Vireo is a common summer resident in southern Connecticut and in the vicinity of New York city, but is rather local in Massachusetts, and absent north of that State. It arrives early in May, and stays through September. It frequents tangled thickets, particularly in lowlands. It seems to be a more excitable bird than the other Vireos, and begins to scold and sing whenever its thicket is approached. It greets a visitor with a startlingly energetic song, containing the notes *chip-whee-oo*. Besides this phrase the White-eye has a great variety of notes, many of them imitative of other birds; I have heard it give the *chip'-churr* of the Tanager and the *dick'-you* of the Chewink. Its scolding-note is a mew, suggesting that of the Catbird.

The White-eyed and Solitary Vireos both have a strong yellow tinge on the sides of the belly, but in the former *the line to and around the eye* is *yellow*, while in the latter it is *white*. The White-eye is small and is rare north of Connecticut; the Solitary is larger and breeds in northern New England, passing through southern New England and the Hudson Valley before the White-eye arrives.

Blue-headed Vireo; Solitary Vireo. *Vireo solitarius*

5.61

Ad. — Top and sides of head dark slate-gray; *line from bill to and around eye white;* back gray, with a greenish-yellow tinge in strong light; wing-bars white; throat and breast white; sides of breast dark gray; sides of belly greenish-yellow.

Nest, a cup, hung from a fork in a horizontal branch. *Eggs*, white, sparsely spotted with brown at the larger end.

The Solitary Vireo is confined in summer to the Canadian and the sub-Canadian areas, but is a common migrant through the rest of New York and New England, passing north in the latter part of April and early in May, and returning late in September and early in October. As a migrant it frequents almost any piece of woodland, often coming into orchards and about houses. It breeds in deep, cool woods, either evergreen or deciduous, preferring possibly the former. It is much less common than the Red-eye, and its voice is louder and richer, so that as one passes along a woodland road, the Solitary Vireos inhabiting the region are easily noted, and are found to be separated by far greater intervals than the Red-eyes. The song resembles that of the Red-eye in form, but it has a sweeter, more appealing tone. Certain passages are characteristic; one is a "double note," that is a phrase repeated

Fig. 26. Solitary Vireo

quickly in a lower key; another resembles the syllables *to-wee'-choo*, the singer sliding from a high to a low note. Sometimes the singer has a fit of ecstasy in which he runs his phrases, ordinarily separated by considerable intervals, rapidly together, and follows them by sweet twittering. The song is not infrequently heard in the autumn, when the bird is migrating south. The alarm-note is an unmusical chatter, similar to that of the Yellow-throated Vireo.

The *white ring around the eye* of the Solitary Vireo and the *white line from the eye to the bill* are excellent field-marks.

YELLOW-THROATED VIREO. *Vireo flavifrons*

5.95

Ad. — Head and upper back greenish-yellow in strong light; rest of back gray; wing-bars white; *throat and breast bright yellow.* *Nest*, a cup hung from a twig, from ten to twenty-five feet above the ground. *Eggs*, white, spotted with brown at the larger end.

The Yellow-throated Vireo is a summer resident in central and southern New York and New England; it is rare north of Massachusetts. It arrives in early May, and stays till the middle of September. Like the Warbling Vireo it prefers the shade trees in the village streets and about houses, and the tall trees along streams; in the northern part of its range it is found only along the alluvial flood plains of large rivers. After an interval of silence in August, it sings again in September, especially early in the morning, and continues to do so till its departure.

The song in form resembles those of the Red-eye and the Solitary, and differs from that of the Warbling Vireo. It is made up of separate phrases, one with a rising, the next with a falling inflection. The notes are louder and richer than those of the Red-eye, but generally harsher and more querulous than those of the Solitary. The phrases are separated by considerable intervals, giving the song a more

leisurely character than that of the Red-eye. The male has a harsh chattering note with which he scolds intruders.

The *bright yellow throat* should distinguish this bird from other vireos. It resembles the Pine Warbler very closely in coloration, and during migration the two might occur in the same places. Ordinarily, however, the Vireo would rarely, if ever, be found in evergreens, and the Pine Warbler rarely away from them. The songs of the two species are very different, and on close inspection the Vireo is seen to be heavier, with a stout bill, while the Pine Warbler has a more slender bill.

Warbling Vireo. *Vireo gilvus*

5.80

Ad. — Upper parts brownish-gray; under parts grayish-white, with a slight yellowish tinge on the belly; a whitish streak over eye, but *no dark line through it.*

Nest, a cup hung from a fork, from twenty to forty feet up. *Eggs,* white, spotted with reddish-brown at the larger end.

The Warbling Vireo is a rather common summer resident of southern and central New England and of the lower Hudson Valley. In northern New York and New England it is confined to the neighborhood of villages in the valleys. In most of New England, in fact, it is a bird of the village street rather than of the woodland, though it is also found in tall trees along streams. It arrives a little earlier in May than the Red-eyed Vireo, and leaves in September.

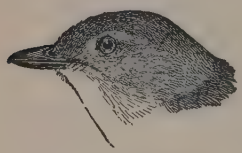


Fig. 27. Warbling Vireo

The Warbling Vireo is less frequently seen than the Red-eye, as it often stays for hours in tall shade-trees, but its song is uttered constantly, and affords an easy means of distinguishing it from its relative. It is a true warble, that is, a succession of smooth notes run into one another, and

though repeated in the height of the breeding season more than four thousand times a day, never varies perceptibly. The song of the Red-eye is made up of short phrases of almost endless variety. Beginners often have great difficulty in distinguishing the song of the Warbling Vireo from that of the Purple Finch. The song of the Finch is extremely rapid and energetic; the Vireo's is deliberate and languid compared with the burst of melody that the Finch utters. The Warbling Vireo, after a period of silence in August, sings again in September, but only for a short time, early each morning. Both sexes have a querulous call-note, which suggests the mew of the Catbird.

If seen at close range, the Warbling Vireo may be distinguished from the Red-eye by the different appearance of the side of the head; there is *no dark streak through the eye*, nor is the light line over the eye bordered above by a black line. From the following species it may be distinguished by the absence of a yellowish tinge on the throat and breast.

Philadelphia Vireo. *Vireo philadelphicus*

4.75

Ad. — Upper parts grayish, tinged with green in strong light; top of head clear gray; cheek gray; a whitish line over eye; under parts *distinctly* but not strongly *tinged with yellow.*

Nest and *eggs*, like those of the Red-eyed Vireo, but slightly smaller.

The Philadelphia Vireo breeds from northern New England northward, and in most of New York and New England occurs only as a very rare migrant, generally in September or early October. In northeastern Maine, in the vicinity of Lake Umbagog, and at Dixville Notch, N. H., it is not uncommon. Here it frequents the thin growth of poplar and bird-cherry in clearings and along roadsides rather than the deeper woods. A male sang constantly in

June, 1903, in a group of birches almost under the eastern windows of The Balsams, at Dixville Notch.

The song is at times identical with that of the Red-eye, though generally a little more languid. One phrase suggests, in form, but not at all in power and sweetness, the double note of the Solitary Vireo. The scolding-note is a harsh *twee-twee-twee*, which closely resembles that of the Warbling Vireo.

A good look at the bird should leave no doubt of its identity; the side of the head resembles the Warbling Vireo instead of the Red-eye, but the entire under parts, particularly the breast, are *distinctly tinged with yellow.* (See Brewster, "Auk," 1903, p. 369, and Dwight, "Auk," 1897, p. 259.)

Red-eyed Vireo. *Vireo olivaceus*

6.23

Ad. — Upper parts brownish, with a greenish tinge in strong light; crown gray, *bordered on each side by a blackish line;* line over the eye white; dusky stripe through eye; under parts white, with no tinge of yellow.

Nest, a cup hung from a fork, from five to twenty-five feet up. *Eggs*, white, spotted with brown, chiefly at the larger end.

The Red-eyed Vireo is a very common summer resident throughout New York and New England, arriving in May, and sometimes staying into October. It lives in deciduous trees, and may be found wherever they occur, — in the woods, orchards, plantations, village or city streets. It is a constant singer, so constant, in fact, that its song is very generally overlooked. It is only when one's ears are opened that we realize how large a proportion of the daily chorus of bird-song is furnished by the Red-eye. The bird itself spends so much of

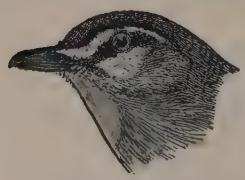


Fig. 28. Red-eyed Vireo

his time among the leaves that unless one knows his song and follows it to its source one sees little of the singer. A male often sings for a long time on one twig, merely turning his head from side to side.

The song is made up of separate phrases of from two to four syllables, with either a rising or a falling inflection, as if the bird were carrying on a conversation. The phrases are separated by very short intervals, and vary greatly. Certain forms recur, but in no fixed order. Beginners have much difficulty in distinguishing the song of the Red-eye from that of the Robin. This latter is a true song, an outburst of melody in which the same phrases are repeated in a definite sequence and after a certain interval. There is more power, too, in the voice. The Red-eye's phrases are each separated by a slight interval, so that it is impossible to say when the song is over; it goes on practically all day. The songs of the Yellow-throated and the Solitary Vireo resemble that of the Red-eye in form, but each possesses more power, and the latter greater sweetness.

To distinguish a Red-eye when not in song from the warblers which frequent the tree-tops, it is necessary to get a view of the pure white under parts, and to note the heavier proportions, and the more leisurely behavior. From the Warbling Vireo it may be distinguished either by the markings on the side of the head (see Fig. 27), or by the song (see p. 135). The red eye is visible only at very short range, when the female, for instance, is sitting in the nest and allows a very near approach.

SHRIKES: FAMILY LANIIDÆ

Migrant Shrike. *Lanius ludovicianus migrans*

9.00

Ad. — Top of head and back ash-gray; black lines extending from sides of throat through the eyes and *meeting over the bill;*

wings and tail black and white; under parts grayish-white. *Im. in summer.* — Top of head and back brownish-gray; breast washed with brownish; black lines hardly extending beyond the eye, and not meeting over the bill.

Nest, in a thick bush or tree, often a hawthorn bush. *Eggs*, whitish, thickly marked with brown.

The Migrant Shrike is a not uncommon summer resident of the Lake Champlain Valley. It breeds rarely in the rest of northern New England, and is a very rare migrant in southern New England and the Hudson Valley. Its habit of perching on the tips of trees or bushes, and its contrasting colors, gray, black, and white, make it easy to observe and recognize. It feeds on grasshoppers, frogs, and mice, and, to a certain extent, on small birds, and impales its prey on thorns. Its song is described as low and musical, and its call-notes as harsh and unmusical. The ordinary shrike in New England between October and April is the Northern Shrike. The Migrant is over an inch smaller than its relative, and the *black marks* in front of the eyes *meet across the forehead.*

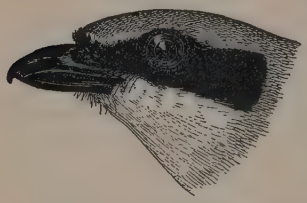


Fig. 29. Migrant Shrike

Northern Shrike. *Lanius borealis*

10.32

Ad. — Upper parts ash-gray, becoming whitish on the forehead, over the eye, and on the rump; a blackish stripe back of the eye, extending to the base of the bill, *but not over it;* wings and tail black and white; under parts grayish-white, crossed with dark wavy lines which show only at close range. *Im.* — Upper parts grayish-brown; wings and tail duller; under parts much more distinctly covered with wavy lines of dark gray.

The Northern Shrike is a winter visitant in New York and New England; rare in some years, not uncommon in

others. It arrives in October, and leaves towards the end of March. Each Shrike, on its arrival from the north, apparently settles for the winter in a fixed region, which becomes its regular hunting-ground. Here one finds, during the winter, mice, small birds, and grasshoppers wedged in the forks of low trees or bushes, or impaled on thorny twigs, and occasionally a Shrike is seen dashing at a flock of frightened birds, and pursuing its victim till it is exhausted and caught. At other times it perches on the top of some tree or bush.

FIG. 30. Northern Shrike

The Shrike sings occasionally all through the winter, but more often in February and March. The song is a medley of harsh calls, mews, and screams, never very loud, interspersed with some rather sweet notes; it suggests the song of the Catbird. Its call-notes are extremely harsh and grating.

A Shrike in adult plumage is unmistakable. Young birds lack the bright black and white of the adults, but they may be recognized by their rather plump look, habit of tilting the tail on alighting, and by the characteristic flight, two or three rapid wing strokes, followed by a scaling flight on set wings. A close inspection will show the heavy bill with its hooked tip. (See Mockingbird, p. 96, and Migrant Shrike, p. 138.)

WAXWINGS, ETC.: FAMILY AMPELIDÆ

CEDAR WAXWING; CEDAR-BIRD. *Ampelis cedrorum*

7.19

Ad. ♂. — Head and throat rich snuff-color, fading into grayish-brown on the back and breast; under parts yellowish; wings and tail ash-gray; *tail tipped with yellow;* shorter wing-feathers often

tipped with red; line from bill through eye black; long *crest-feathers* often conspicuously elevated.

Nest, of grass, stalks of weeds, etc., on the limb of a tree, from ten to thirty feet up. *Eggs*, gray or bluish, spotted with black or dark brown.

A few Cedar-birds are occasionally seen in southern New England and the lower Hudson Valley in early winter, and in mid-winter great flocks appear, especially near the coast, and feed on the berries of the red cedar. In April these birds often disappear, and the breeding birds do not arrive till May. These come in small flocks, and do not pair till June, and often do not build till July. They now frequent almost every kind of country where both trees and open spaces occur, nesting in orchards, neglected pastures, and open spaces in woodland throughout New England and New York. In the upland region of middle New England they are among the most abundant birds. In late summer they gather about water, and spend much time flying out or up after insects. They are very fond of small fruits, and in September gather in flocks, often with Robins, in the rum-cherry trees. By November they have almost all disappeared. The young in early fall have none of the rich brown of the parents, being of a much grayer shade, with streaked breasts. Cedar-birds often fly in compact flocks, which wheel on set wings before alighting. Their only note throughout the year is a wheezy lisp.

SWALLOWS: FAMILY HIRUNDINIDÆ

Five species of Swallow (the Chimney Swallow, so called, is really a Swift; see p. 210) occur throughout New York and New England. The Barn Swallow is by far the commonest, and is found wherever old-fashioned barns exist; though a meadow-haunting bird in inland regions, it is a constant visitor along the sea-beaches, and over bays and

harbors. The Bank Swallow occurs over lakes and streams near steep banks of sand. The other three — the White-bellied Swallow, the Eave Swallow, and the Purple Martin — are more or less local, and may be wholly absent from any given locality. Where the Eave Swallow occurs at all, it is generally found in large colonies. The White-bellied Swallow is common in the Maine wilderness, nesting in dead trees, and is an abundant migrant along the salt marshes and where bayberries abound, hovering over the marshes by day, and gathering at night in enormous flocks.

ROUGH-WINGED SWALLOW. *Stelgidopteryx serripennis*

5.75

Ad. — Upper parts dark brown; *throat and breast brownish-gray;* belly white. *Im.* — Similar to adult, but wings tinged with cinnamon.

Nest, in holes in sand banks, or in a crevice of masonry or a ledge of rock.

The Rough-winged Swallow is a summer resident of the lower Hudson Valley, locally common at Riverdale, Hastings, and Sing Sing; it occurs here and there in northern New Jersey, and in southwestern Connecticut as far north as Hartford. From the rest of New England it is apparently absent, though a pair has bred for many years in a limestone quarry at North Adams, Mass. It arrives in April and leaves in August.

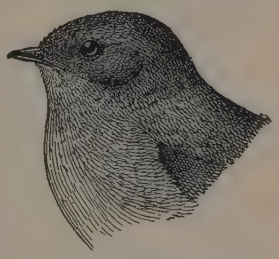


FIG. 31. Rough-winged Swallow

The Rough-winged Swallow often breeds in banks with Bank Swallows, and can then hardly be distinguished from the Bank Swallow except by a trained observer; the upper parts are very similar, but the throat of the Rough-wing is darker, and the middle of

the breast lighter than in the Bank Swallow, so that there is no appearance of a dark band across the breast. The choice of a nesting-site is often a clue to the bird's identity; if one sees in the region above defined what is apparently a Bank Swallow entering a crevice in masonry or in a natural ledge of rock, or a hole in a building, one may be pretty confident that it is a Rough-winged Swallow.

Bank Swallow. *Riparia riparia*

5.20

Ad. — Upper parts grayish-brown; under parts white; a *brownish band across the breast;* tail slightly forked.

Nest, in a hole in a sandy bank. *Eggs,* white.

The Bank Swallow is a summer resident throughout New York and New England, arriving late in April, and leaving early in September. Over the surface of the large New England rivers, from the Housatonic to the Penobscot, and up the valleys of their tributaries, far into the mountains, little bands of these small brown swallows hunt back and forth throughout the summer. Banks of clay or sand, cut through by the river, are breeding-sites for colonies of them; occasionally they take possession of a deserted gravel-pit. Here the little toes scratch out holes which run two or three feet into the bank; often there are many holes close to each other, and perhaps a Kingfisher's hole, twice as large as the swallow's, among them.

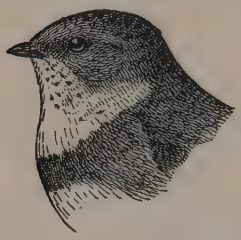


Fig. 32. Bank Swallow

The small size of the Bank Swallow, the absence of any blue or greenish lustre, and its harsh, gritty note easily distinguish it from all other adult Swallows, except in southwestern Connecticut and the lower Hudson Valley. Here the Rough-winged Swallow must be taken into considera-

tion (see p. 141). Young White-bellied Swallows have brown upper parts, and in their first plumage a wash of brown on the sides of the breast, but no decided *band entirely across the breast*, as in the Bank Swallow.

TREE SWALLOW; WHITE-BELLIED SWALLOW. *Iridoprocne bicolor*

5.90

Ad. ♂. — Upper parts greenish-blue, especially bright in strong light; *under parts pure white;* tail notched, but not deeply. *Ad.* ♀. — Upper parts usually duller. *Im.* — Upper parts brown; a faint incomplete dusky collar across the breast.

Nest, in a hole in a tree, or in a box. *Eggs,* white.

The White-bellied Swallow is a summer resident throughout New England and the Hudson Valley, but it is only locally common. Many of the boxes formerly tenanted by Swallows are now occupied by English Sparrows. In pure farming country, as along the Concord River, the White-bellied Swallow is still a characteristic feature of the farm. In wilder country, in northern New England, and occasionally throughout its range, it nests in deserted woodpecker holes in trees. About the first of April the earliest arrivals appear along the sea-shore, or over some lake or river, and in a week or two their shrill notes are heard about the farmhouses where they breed. As early as July migrants begin to return from the north, and multitudes now collect over the marshes and along the beaches at the sea-shore, fringing the telegraph wires for rods, hovering in clouds over the bayberry bushes, the fruit of which they eat, or sunning themselves on the sand. A few stay into October.

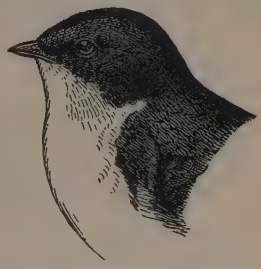


FIG. 33. Tree Swallow

The notes of the Tree Swallow are generally sharp and high, but occasionally sweet and twittering. Near a breeding-site the male may be heard singing before dawn, either from the box, or as he flies to and fro in the darkness.

The pure white under parts distinguish this swallow from both the Barn and Eave Swallows, each of which has a reddish-brown chin. The Bank or Sand Swallow has a brownish band across the upper breast. Young White-bellied Swallows not only lack the steel-blue of the adult, but have a faint brownish collar *nearly across* the breast; they must therefore be carefully distinguished from the Bank Swallow, which has a broad dark band *completely across* the breast. The flight of all four swallows may be distinguished after much practice. The White-bellied often hangs in the wind with outspread wings and tail, and back curved like a dolphin.

Barn Swallow. *Hirundo erythrogastra*

6.95

Ad. — Entire upper parts, except the forehead, deep purplish-blue; *forehead, upper breast, and throat chestnut;* sides of throat and upper breast bluish; lower breast and belly varying from salmon to whitish; *outer tail-feathers long and narrow;* tail, when spread, much spotted with white. *Im.* — Outer tail-feathers shorter than in adult.

Nest, made chiefly of mud mixed with straw and lined with feathers, placed commonly against a rafter of an open barn. *Eggs*, white, speckled with brown and lavender.

The Barn Swallow is a very common summer resident of all New York and New England, wherever there is any grass-land. It arrives towards the end of April, and leaves early in September. It builds a nest of straw and mud on a rafter of a barn or shed, or occasionally on some projection outside, but not fastened by the side

Fig. 34. Tail of Barn Swallow

under the eaves. In late June the old birds are very busy, hawking for insects over the tall grass in the meadows, and flying in and out through the open door, or through a broken pane. In July the young appear, sitting on the shingles on the slope of the roof, or later on the dead branches of neighboring trees, or on the fences. Here they are still fed by the parents. A little later, they too are constantly on the wing and are fed in the air, the old bird and the young one mounting upward together, their breasts almost touching. The young at this season lack the long outer tail-feathers.

The Barn Swallow's notes are pleasing and often musical. In the barn, or when flying in friendly companies, they utter a gentle twitter. When they become excited, this changes to a more emphatic *kit-tic.* The male often sings a song of some length, which ends with a very curious rubbery note. The song is uttered either high in air or from the barn ridge-pole.

When a Barn Swallow perches, the long outer tail-feathers show like two long needle-points projecting beyond the wings. These long feathers and the white in the tail distinguish the Barn Swallow from all the other swallows.

Cliff Swallow; Eave Swallow. *Petrochelidon lunifrons*

6.01

Ad. — Head dark blue; *forehead cream-white;* back dark, with bluish reflections; *rump pale brick-red;* throat deep chestnut; belly whitish; tail square or fan-shaped in flight.

Nest, of mud, under the eaves of barns or outbuildings. *Eggs,* white, spotted with reddish-brown.

The Eave Swallow is a summer resident of New England and New York, arriving about the first of May, and leaving early in September. In some regions it is very abundant, but it is often absent from wide areas, as about Boston. Even

where it does not breed, it may be observed as a migrant near large bodies of water. Its ordinary note is a harsh monosyllable.

In western Massachusetts and in northern New England, colonies, numbering frequently over fifty nests, may be found under the eaves of barns on large farmsteads; these colonies are often a mile or so apart, whereas the Barn Swallow inhabits almost every outbuilding along the road. Toward the end of May, Eave Swallows are seen hovering daintily over mud-puddles, or flying with a pellet of mud to their half-finished nests. These are composed of mud, and are gray when dry; they are placed outside of the barn, directly under the eaves, and are often retort-shaped, that is, furnished with a neck bent away from the round body of the nest.

Fig. 35. Cliff Swallow

The sitting female often thrusts out her head, showing the *cream-white frontlet*, and in early July, as the parents fly up to the nests from below, or cling to the entrance, they show the *reddish-brown rump*.

Purple Martin. *Progne subis*

8.00

Ad. ♂. — *Entire body* glossy *blue-black;* wings and tail brown. *Ad.* ♀. — Upper parts, wings, and tail brown, glossed on the head and back with purple; throat and forehead gray; breast brown; belly whitish.

Nest, in "martin boxes." *Eggs*, white.

The Purple Martin is a summer resident throughout New York and New England, but it is extremely local, and apparently growing more rare. Martin boxes set up on tall poles are an interesting feature of many villages and farmsteads, but through large sections of the country, most of Berkshire County, Mass., for instance, Martins are entirely absent. They seem to have a decided preference for the valleys of slow streams, where they may hawk over extensive meadows and sheets of water. They return to their boxes toward the end of April, and leave New England before September.

Their loud, deep voices and the rich blue-black of the males make them attractive neighbors. They spend much time sitting on the doorsteps, so to speak, of their houses, — the ledge before the entrance to the box. In July the young birds are seen thrusting their heads out for food. The ordinary notes are a deep musical *pew, pew, pew*, and a twitter like that of the Barn Swallow, but richer. They have also a harsh squeak. The colonies nearest Boston are in West Roxbury, Hyde Park, Dedham, Lexington, and Concord; near New York city there are colonies at Plainfield, N. J.

TANAGERS: FAMILY TANAGRIDÆ

Scarlet Tanager. *Piranga erythromelas*

7.25

Ad. ♂. — Entire body bright scarlet; wings and tail black. *Ad.* ♀. — Upper parts greenish; wings and tail brown; under parts yellowish. *Ad.* ♂ *in autumn.* — Like the ♀, but wings and tail black. *Im.* — Like the female, but ♂ has black wing coverts.

Nest, of fine twigs, loosely built, on a limb, seven to twenty feet up. *Eggs*, bluish, with reddish-brown markings.

The Scarlet Tanager is a summer resident throughout New England and New York, common in southern New

England, especially in oak and chestnut woods, rarer in the evergreen forests of northern New York and New England. It arrives early in May, and is occasionally seen in September. The Tanager is chiefly a bird of the forest trees, though it not infrequently nests about houses in well-wooded towns or villages. It is not a very active bird, and unless its note attracts attention, it escapes observation to such a degree that it is commonly considered rare.

Its song, rhythmical, hoarse, and not long sustained, suggests a Robin with a cold. Occasionally, in the height of the breeding season, it is a prolonged and sweet performance. Both sexes have a characteristic call-note, *chip-churr*, the last note lower. The female can hardly be confused with anything else; it is hard, however, to think of a yellowish bird, with greenish upper parts, as a "Scarlet" Tanager.

FINCHES, SPARROWS, ETC.: FAMILY FRINGILLIDÆ

The Sparrow family includes a larger proportion of the bird population of any region than any other family, but many of its representatives go by the name of Finches, or conceal their relationship by other names. One branch of the family contains chiefly bright tree-haunting birds of northern affinities. Many of these are of only irregular occurrence in southern New England; such are the Crossbills, the Redpoll, and the Pine Grosbeak. The Goldfinch is common throughout New York and New England, and the Purple Finch common north of Connecticut. Another branch of the family includes three or four bright-colored birds of southern affinities; these are the Indigo-bird, the Rose-breasted Grosbeak, the Cardinal, and the Chewink. The rest of the family is mainly made up of the brown, ground-haunting birds, that are commonly referred to as Sparrows.

These inhabit every sort of country except the deep forest; some are local, and never occur except in salt marshes or wet meadows; others, like the Song Sparrow and the Chipping Sparrow, are widely distributed. The White-crowned, Tree, and Fox Sparrows breed north of the United States, and occur here only as migrants; others, such as the White-throated Sparrow and the Junco breed only in northern New York and New England. In trying to identify a brown Sparrow one should notice first of all whether the breast is streaked or not; the next important point to settle is the presence or absence of yellow, buff, or black lines on the side of the head.

Indigo Bunting; Indigo-bird. *Cyanospiza cyanea*

5.59

Ad. ♂. — *Entire body* deep *indigo-blue*, deepest on the head, often with greenish reflections; wings and tail brown, the feathers margined with blue. *Ad.* ♀ and *Im.* — Upper parts light brown, *unstreaked;* under parts grayish, washed with brown, especially on the breast; wings and tail sometimes margined with bluish, *Ad.* ♂ *in autumn.* — Like the ♀, but wings and tail decidedly bluish.

Nest, in low bushes, a foot or two from the ground. *Eggs*, white.

The Indigo-bird is a common permanent resident of New England and New York, very common on the upland region of New England, but not known to occur on Cape Cod. It arrives early in May, and remains till October. It frequents bushy roadsides, overgrown pastures, and the edges of woodland. In the fall it is found in low gardens or cornfields, or neglected weedy spots.

The male generally sings from the top of some low tree, where his deep color fades into the blue or light-colored background of the sky. The song is difficult for beginners to remember; it consists often of sets of phrases given in a

high key, then repeated in a slightly lower key, growing feebler as the song ends. It resembles the syllables *swee-swee-swee, swee-swee* (slightly lower), *sweet-sweet-sweet, swee-swee* (slightly lower), *swee, swee, swee.* The song is heard constantly through July and into August.

The male can be confused only with the Bluebird, and then only if the under parts are not seen; no other New England bird is *blue all over.* The female may be known by her *unstreaked* brown back, her brownish under parts, and her habit of twitching the tail sideways as she appears and disappears in the roadside thickets.

Rose-breasted Grosbeak. *Zamelodia ludoviciana*

8.12

Ad. ♂. — Head, throat, upper back, wings, and tail black; wings and tail much spotted with white; lower back white; *breast rose-red,* a stripe of this color often extending down the white belly, and a salmon tinge under the wings; *bill* large, *white* when seen from below. *Ad.* ♀. — The black of the male replaced by brown; back and breast streaked; bar across the wing and *line over eye, white;* line through crown white, streaked with brown; bill large, light colored. *Ad.* ♂ *in late summer and fall.* — Head brown; line above eye whitish; back brown; rump whitish; breast pink, veiled with buff; wings and tail *jet-black* and white. *Im.* ♂. — Similar to *ad.* ♂ in late summer, but pink not so extensive; *wings and tail brown.*

Nest, of twigs, loosely constructed, from five to twenty-five feet up in bush or tree. *Eggs,* pale blue, with numerous brown markings.

The Rose-breasted Grosbeak is a summer resident throughout New York and New England, common in some regions, but rare in others, for instance on Long Island. It is said not to occur on Cape Cod, and in the upland of northern New England, though found even high up on the mountains, it is nowhere common. It arrives in May, and remains into September. Of late years it has shown a preference for villages, and even for city streets, if well-

shaded; it also occurs in orchards, but apparently its natural habitat is a growth of young trees or saplings, particularly in low ground. In midsummer it is often seen in potato-fields, collecting the slugs of the potato-beetle to carry to its young.

The song of the Rose-breasted Grosbeak is a fine, powerful warble, with some of the cadence of the Robin's song,

Fig. 36. Rose-breasted Grosbeak, Female

though faster; a "glorified Robin," Burroughs has called it. Its alarm-note is a sharp, metallic *click*.

The female looks like an overgrown sparrow, and may readily be told by her large bill, the *white line over her eye*, and the white on the wing. As the male flies, he shows a ring of white, formed by the white in his wing.

Cardinal. *Cardinalis cardinalis*

8.25

Ad. ♂. — Top and sides of head, conspicuous crest, and under parts bright red; forehead and throat black; back, wings, and tail tinged with gray; bill red. *Ad.* ♀. — Crest, wings, and tail dull

reddish; upper parts brownish; throat gray; rest of under parts dull buffy, sometimes showing a trace of red on the breast; bill light-colored. *Im.* — Similar to ♀, but bill blackish.

Nest, in bushes or vines, of twigs, bark, and rootlets. *Eggs*, white or bluish-white, spotted with brown or lavender.

The Cardinal is a permanent resident of northern New Jersey, Staten Island, and the lower Hudson Valley, as far north as Hastings; it is rare on Long Island, but is not uncommon in Central Park; in New England it occurs only as an accidental visitor. It frequents thickets, especially along streams, mounting tall trees to utter its loud, pure whistle, but seeking its food in the shrubbery, or on the ground. In winter it frequents warm hollows on sheltered hillsides.

Its notes are too numerous to transcribe, but are nearly all loud and clear; the same note is generally repeated with energy and rapidly. Some common forms of the song resemble the syllables *whoit, whoit, whoit*, etc., *kū, kū, kū*, etc.; one form ends in a series of *ee's* "so long continued that it apparently ends only when the singer becomes out of breath." The female also has sweet whistled notes, and both sexes utter as an alarm-note a sharp *tsip*, slight in proportion to the size of the bird.

There is no other bird in New York or New England with which the male Cardinal can be confused; the Tanager has black wings and tail, and no crest. The female shows a reddish tinge in her crest, wings, and tail, and, like the male, has a trick of nervously jerking her tail upward.

Towhee; Chewink. *Pipilo erythrophthalmus*

8.35

Ad. ♂. — Head, throat, breast, back, wings, and tail black; the wing-feathers margined with white; the outer tail-feathers with large white spots; belly white; *flanks chestnut*. *Ad.* ♀. — The black of the male replaced by a *light reddish-brown*; otherwise

similar. *Im.* — Head and back brown; breast streaked with black; wings brown and white; tail as in *ad.*

Nest, on the ground, often under a heap of brush. *Eggs*, white, evenly speckled with brown.

The Chewink is a common summer resident of southern and central New England and of the Hudson Valley. In the northern parts of New York and New England it is confined to the more settled portions, and frequents pastures that are becoming overgrown with bushes. It arrives late in April, and stays into October. It is abundant in scrubby oak, such as is common on Cape Cod and on Martha's Vineyard. When undisturbed, it scratches energetically in the dry leaves under the bushes, or mounts some low tree to sing.

FIG. 37. Towhee

The song varies considerably, but as a rule resembles the syllables *dick-yoo, chiddle-chiddle-chiddle.* The Chewink has two broods, and therefore sings well into July. The alarm-note, *chĭ-wee'*, has given the bird its name; often the southern name, Joree, seems to suggest the note better. During the breeding season it has a sharp, sibilant call-note which suggests the *sst* of certain of the sparrows.

FIG. 38. Tail of Towhee

When startled, the Chewink flies with jerks of its widespread tail, so that the large white spots on the outer tail-feathers show clearly. When seen from below, the angle made where the black breast meets the white belly is an excellent field-mark. At close range the bright red iris is conspicuous.

Fox Sparrow. *Passerella iliaca*

7.26

Ad. — Top of head and back reddish-brown and gray; *tail reddish-brown;* sides of throat and breast thickly marked with bright reddish-brown spots, forming a heavy blotch in the centre of the breast; belly and sides marked with *dark brown arrow-shaped spots.*

The Fox Sparrow is a common migrant through New York and New England from the middle of March to the end of April, and from the middle of October to the end of November. The bushes along the edges of cultivated fields and open places in woods are the resort of this large and handsome sparrow. When a flock of Fox Sparrows are startled from the ground, they generally fly into a tree, one after another, instead of diving headlong into cover after the manner of their frequent companions the Song Sparrows. The rich *tawny color* of the back and head, and particularly the *reddish-brown tail*, are then conspicuous. When seen on the ground, the *large arrow-shaped markings* on the white breast and flanks are prominent. When on the ground, they scratch with both feet at once, jumping forward and back, often making a noticeable rustling among the leaves. Often the little flocks which we meet are silent, but sometimes they sing freely.

The song is loud and rich, one of the finest of sparrow songs; there is a suggestion of generosity and courage in the manner of its delivery and the fullness of its tone; it is occasionally heard in the autumn. The ordinary call-note is a *st*, similar to that of the Song Sparrow and the Whitethroat, but slightly heavier. The bird also utters a *chuck* of alarm.

The fox color should distinguish this sparrow from the others. Certain Song Sparrows, especially those seen in early spring, are so unusually reddish-brown on the upper parts, that a beginner might be puzzled to decide whether they

were Song Sparrows or Fox Sparrows, but as in many similar cases, a doubtful Fox Sparrow is probably a spurious one; the genuine Fox Sparrow is so very tawny that, when he really appears, no doubt of his identity is left in the mind. The White-throated Sparrow's period of migration slightly overlaps the Fox Sparrow's, both in April and October, but the tail of the former is grayish-brown. The Fox Sparrow is not infrequently mistaken for the Hermit Thrush; the tail is reddish-brown in both birds, but the back and head of the Thrush and his breast-markings have none of the rich tawny color of the Sparrow.

Swamp Sparrow. *Melospiza georgiana*

5.89

Ad. in summer. — *Crown* rich *reddish-brown*, blackish on the forehead; back brown, streaked with black; wings reddish-brown; breast and sides of throat ashy gray, unstreaked; throat whitish; flanks washed with brownish. *Ad. in winter* and *Im.* — Crown streaked with black and reddish-brown.

Nest, on the ground. *Eggs*, whitish, thickly covered with brownish markings.

The Swamp Sparrow breeds in any extensive grassy swamp throughout New England and the Hudson Valley, arriving early in April, and remaining through October. Along the sea-coast of southern New England and New York, where the winter is not very severe, it occasionally winters in the edges of the cat-tail swamps. In migration, especially in September and early October, when Swamp Sparrows are often abundant, they may occur at some distance from swamps or wet meadows.

The song of the Swamp Sparrow is simple but musical, as if a Chipping Sparrow were singing in the marshes an unusually sweet song. Toward evening the birds make many little twittering and scolding sounds, as they pursue each other to and fro. The call-note is a metallic *chink*,

resembling that of the White-throated Sparrow, but a little less heavy.

In spring the *chestnut crown* and reddish-brown of the wings, without white bars, distinguish the Swamp Sparrow from all but the Chipping Sparrow; the latter, however, never resorts to the wet swamp lands and has a more slender, less stocky figure (see p. 162). In the fall the *unstreaked breast* distinguishes it from the Song Sparrows which abound in the swamps at that season. The Swamp Sparrow has a square whitish throat-patch, but it is far less conspicuous than the pure white throat of the White-throated Sparrow; the latter moreover may readily be distinguished by its greater size and the black and white head markings. (See Fig. 45, p. 164.)

Lincoln's Sparrow. *Melospiza lincolnii*

5.75

Ad. — Upper parts brown, finely streaked with black and gray; under parts white, finely streaked with black, and *washed across the breast with buff.*

The Lincoln's Sparrow, or Lincoln's Finch, is a rare migrant through New York and New England in May, late September, and early October. It is probably less rare in western New England than along the eastern coast. In spring it frequents the bushes on the edges of swampy or wet places, especially in valleys which are good migration routes. In the fall it accompanies the migrant Song and Swamp Sparrows, and may be found near the grassy swamps and wet meadows where these species then congregate. It rarely sings on migration, and only occasionally utters its alarm-note, a slight *tsup*.

It requires a well-trained eye to distinguish it from the Song Sparrow. It is possible to find it by persistently gazing at every sparrow in a migrating company in turn, using the opera-glass, until one is at last discovered with a pale buff

band across the narrow streaking of the breast. When one has become familiar with the species, other differences are apparent; the bird is smaller than the Song Sparrow, trimmer, more elegant. Its tail is shorter, and the color of its back and the side of its head is olive-gray rather than reddish-brown. It is more apt than the other sparrows to raise its crest-feathers slightly when alarmed. (See "Bird-Lore," vol. ii. p. 109.)

Song Sparrow. *Melospiza cinerea melodia*

6.30

Ad. — Upper parts brown, the back streaked with darker brown; top of head reddish-brown, with streaks of *gray* through centre and over each eye; breast and sides streaked with reddish-brown, the streaks generally coalescing to form a *large spot* in the *centre of the breast;* two other large spots at the sides of the throat; tail rather long.

Nest, placed either in grass or sedge on the ground, or in a low bush. *Eggs*, heavily spotted with reddish-brown.

The Song Sparrow is a common permanent resident in the lower Hudson Valley and in southern Connecticut and Rhode Island; it winters not uncommonly in the edges of marshes or in piles of brush along the Massachusetts coast. In the rest of New York and New England the Song Sparrow is an abundant summer resident, arriving early in March and remaining through October. Where the bird winters, its song may be heard on mild days, even in the winter months, and especially during the latter part of February, but in general its song is one of the signs of spring.

Fig. 39. Song Sparrow

From about the middle of July, through the late summer

and fall, the Song Sparrow utters from the weeds or cornfields a low warbling song, quite different from the ordinary sprightly song. The ordinary alarm-note of the Song Sparrow is a sharp *tschik ;* another very common note may be written *sst ;* White-throats and Fox Sparrows both utter notes similar to the last, but slightly heavier. The song is subject to endless variation in the species, and varies to a considerable degree even in the same individual, but it commonly begins with three brisk notes or pairs of notes, *whit, whit, whit,* or *o-lit o-lit o-lit,* and in the middle of the song there is apt to be a harsh burring note, after which the song runs quickly out to some ending.

The Song Sparrow is found wherever there are bushes, but particularly near water. It is a brisk, active bird, but not at all fond of the open, diving headlong into the nearest tangle when alarmed. When in the bushes it is continually hopping about, with jerking movements of wing and tail. Only when preening its feathers after a bath, or when singing from the top of some low tree, does it sit quiet. (See under Vesper Sparrow, p. 172, and under Savanna Sparrow, p. 170.)

Slate-colored Junco; Snowbird. *Junco hyemalis*

6.27

Ad. ♂. — Head, back, throat, and breast slate-gray, the latter sharply defined from the white belly; two *outer tail-feathers* and part of the third, *white. Ad.* ♀. — The upper parts browner; throat and breast paler. *Im.* — Upper parts, throat, and breast streaked.

Nest, often built in the side of road, or in a depression in a bank, or on the ground. *Eggs,* white, spotted with brown.

The Snowbird is a common winter resident of southern Connecticut and Rhode Island, and the lower Hudson Valley, and not uncommon along the Massachusetts coast as far north as Boston. In the interior, where snow is deep during

much of the winter, the Snowbird occurs only as a migrant, through April, and again in late September and October. On the higher summits of Berkshire and Worcester counties, on the Catskills, and in northern New England and New York, wherever there are patches of spruce, the Snowbird is a common summer resident. In winter flocks frequent the warm slopes where weedy patches have been laid bare, in severe weather often coming about the house and barn, particularly if seed is scattered for them. In the spring migration they are found at the edges of cultivated fields, and along the roadsides; and in the autumn in more open woodland. They breed either on rocky mountain tops, where they occur higher up than any other bird, or in spruce forests, particularly where there are clearings or pastures.

Fig. 40. Slate-colored Junco

The Snowbird's song is a pleasant little jingle, like the clinking of bits of metal struck rapidly together. (See under Chipping Sparrow, p. 161.) The bird sings often from a stone, or from the top of an evergreen. It has also a smack of alarm, a *peu peu peu*, uttered when two birds are quarreling, and a twittering sound given when one bird starts to fly, apparently to keep the flock together.

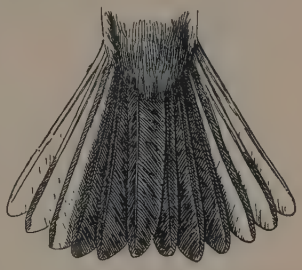


Fig. 41. Tail of Slate-colored Junco

The pure *white* V made by the *outer* tail-feathers, when the bird rises from the ground, or the dark cowled appearance of the head, as it is seen from below, easily distinguish it.

Field Sparrow. *Spizella pusilla*

5.68

Ad. — Top of head and back reddish-brown ; a rusty streak behind the eye; cheeks otherwise grayish ; gray line over eye, but no black line through it ; *bill reddish-brown ;* wing-bars whitish ; under parts gray ; breast washed with pale buff.

Nest, placed on the ground, or in a low bush. *Eggs*, white, with brown markings.

The Field Sparrow is a common summer resident of southern New England and the lower Hudson Valley; in northern New England it is confined to the cleared land in the settlements, and it is absent in the Canadian Zone. It arrives early in April, and remains through October. There are several records of its occurrence in southern New England in winter. Old pastures, overgrown with high bushes and cedars, and the edges of woodland are its favorite resorts; it is never a bird of the yard, or of the cultivated fields.

Fig. 42. Field Sparrow

Its song is a fine strain, beginning with two or three high sustained, piercing notes, then running into a succession of similar, more rapid notes, all in a minor key, and often running down, or occasionally up, the chromatic scale. Sometimes the last rapid notes rise, and occasionally one note is repeated throughout. A beautiful form of the song, often given towards evening, is made by a repetition of the whole in a different key, as soon as the first part is ended. The call-note is a *tsip* lighter than that of the Chipping Sparrow.

The *reddish-brown bill* of the Field Sparrow is the best mark by which to distinguish it from the Chipping Sparrow; any one familiar with the bird soon learns also to recognize a certain characteristic aspect of the side of its head, where its black eye stands out in contrast with the

light gray around it; in the Chipping Sparrow the black line through the eye and the white line over it give the head a very different appearance.

Chipping Sparrow. *Spizella socialis*

5.37

Ad. — Crown reddish-brown, a gray line over the eye, *a black line through it;* cheek gray; back brown, streaked with black; under parts ash-gray; bill black (cinnamon-brownish in winter); tail long and slender, rather deeply notched. *Im.* — Young birds in the first plumage have the breast streaked, in the next they lack the reddish crown.

Nest, always lined with horsehair, placed in a bush, vine, or low tree. *Eggs*, bluish, with brown or blackish markings.

The Chipping Sparrow is an abundant summer resident throughout New York and New England, breeding even in the forested regions wherever there are clearings and cultivated ground. It arrives early in April and remains through October. It is common in the village dooryards, about farm buildings, along the roadsides, and in the pasture, especially where there are groves of red cedars. It is unsuspicious, and often comes to the doorstep in search of food.

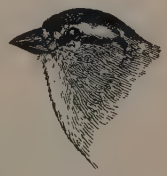


Fig. 43. Chipping Sparrow

The song is a succession of staccato notes, or rather the same note repeated rather rapidly; the songs of different individuals vary greatly as to time. The song resembles that of the Snowbird, but is drier and less musical; the Swamp Sparrow's song is still more powerful and musical, while the Pine Warbler's song is a trill, the notes running lazily into each other. The Chipping Sparrow's call-note is a slight *tsip*.

The reddish-brown crown and *unstreaked ashy breast* distinguish it readily from most of the other sparrows; from its close relative the Field Sparrow it may be told in

summer by its *black bill* and the *black line through the eye;* in the fall Chipping Sparrows are often seen with reddish-brown bills. There is more black in the Chipping Sparrow's back and less reddish-brown, so that its back looks darker. From a description of the Swamp Sparrow, one might suppose that it resembles the Chipping Sparrow; as a matter of fact, the latter is so slender and its tail is so long, that even if the two happened to come together as migrants in the spring and fall, one ought to have no difficulty in distinguishing them.

Tree Sparrow. *Spizella monticola*

6.36

Ad. — Crown reddish-brown; back brownish, streaked with black; wing-bars white; under parts pale gray; a *dusky spot* in the *centre of the breast;* sides tinged with reddish-brown.

The Tree Sparrow is a common winter visitant in New York and New England, appearing in October and leaving in April. It is even more numerous as a migrant than in winter. Tree Sparrows frequent sheltered spots where food and cover can be found; the edges of marshes, old fields grown up to weeds, and dry hillsides covered with ragweed (*Ambrosia*) are favorite resorts. A single bird is rare, and flocks sometimes number a hundred. They scatter over the feeding-ground, reaching up for the seeds, jumping for them, or even lighting on the taller plants, and bending them down with their weight. A snow-fall enables them to reap a harvest from still taller plants, and their tracks now form a network from one stalk to the other.

Fig. 44. Tree Sparrow

While feeding, the flock keep up a cheerful twitter, each bird repeating the syllables *teel-wit* in a sweet, lively tone. When startled the Tree Sparrow utters a slight *tsip*. This note is also used as a call-note, and may be heard on dark winter afternoons as the birds fly into weedy thickets to spend the night. The song, uttered in March and April, and occasionally in the autumn, is sweet and rather loud, beginning with four long-drawn notes, *whee-hee-ho-hee* (Langille). The form of the opening is like that of the Fox Sparrow, but the notes are not so rich and powerful.

In winter the Tree Sparrow may easily be distinguished from any other wintering sparrow by its unstreaked breast, chestnut crown, and white wing-bars. In October and April it often associates with Chipping Sparrows and Field Sparrows, and from these two species it may be distinguished by its greater size and the whiter wing-bars, but chiefly by a *dusky spot* in the *centre of the breast.*

WHITE-THROATED SPARROW. *Zonotrichia albicollis*

6.74

Ad. — Crown black, with a white stripe through the centre; a broad white stripe over each eye, ending in a *yellow line before the eye;* back and wings rich reddish-brown; wing-bars white; a square *white throat-patch* bounded by ash-gray; breast pale-gray; belly white; sides of belly brownish; tail brown, with no tawny tinge. *Im.* — Crown dark brown; stripe through middle of crown very faint; line over eye dull buffy; yellow before eye dull; throat-patch grayish-white.

Nest, placed either on the ground, or in low bush. *Eggs,* heavily spotted with pinkish-brown.

The White-throated Sparrow is a common summer resident of the Canadian Zone, wherever balsam firs grow. In southern and central New York and New England it is a common migrant in late April and early May, and again in late September and through October. A few White-throats winter in southern New England and in the lower Hudson

Valley, finding shelter in piles of brush, or the edges of marshes. In migration they frequent dry roadside thickets, or shrubbery, where they scratch for food on the ground, or fly when startled into the neighboring trees. In the breeding season they prefer overgrown clearings, where raspberry-bushes grow breast high among fallen trees, or the swampy forests of balsam fir.

FIG. 45. White-throated Sparrow

Their song is perhaps the most noticeable sound in the northern woods, and oftenest attracts the attention of a beginner; it is easily imitated by whistling, and has been variously rendered as *Old Sam Peabody, Peabody, Peabody*, or *Sow wheat, Pēēverly, Pēēverly, Pēēverly;* in fact it is often called the Peabody-bird. The song is often attempted in the fall, but is rarely clear and true at that time. Even in summer it often drops on the second triplet to a flatted note. The alarm-note is a brisk metallic *chip;* this note is also used in the dusk when the birds are settling for the night. Another note is a *sst* similar to the lisp of the Song Sparrow and the Fox Sparrow. (See following species.)

WHITE-CROWNED SPARROW. *Zonotrichia leucophrys*

6.88

Ad. — Crown black, with a broad white stripe through the centre, and a white line extending back from the eye; *no yellow before the eye;* sides of head and back of neck brownish-gray; back, wings, and tail brown; wing-bars white; under parts gray; *no well-marked white throat-patch; bill reddish-brown. Im.* — Crown reddish-brown; stripe through centre pale grayish-brown; otherwise as in adult.

The White-crowned Sparrow is a migrant in May, and in late September and October; rare in eastern Massachusetts and in the Hudson Valley, not uncommon at times in Berkshire County and in the White Mountains. It is fond of the

same places that the White-throated Sparrow frequents, — thickets and undergrowth, the edges of roads, and weedy patches.

FIG. 46. White-crowned Sparrow

Its song is too rarely heard; it begins with pure sweet notes that suggest the Meadowlark's whistle, or a Vesper Sparrow singing louder than usual, and continues with notes that recall the Black-throated Green Warbler; the whole performance is quite different from the song of the White-throat.

An adult bird is distinguished from its relative the White-throat by the absence of yellow before the eye, by the pure ashy throat, which lacks the square white throat-patch, and by the different aspect of the crown, — the *broadest white stripe* is *in the centre*, and there is no broad stripe of white over the eye. The shape of the head, moreover, is different and characteristic: the back of the head seems a little higher than the crown. In fall the immature bird must be distinguished by the cleaner look about the sides of the head and throat; everything is ashy-gray, except the crown. The bill in both adults and young is *reddish-brown*.

SEASIDE SPARROW. *Ammodramus maritimus*

6.00

Ad. — Upper parts brownish-gray, nearly uniform; *line from bill to eye yellow; throat whitish*, with a dark streak on each side; rest of under parts grayish-white; breast streaked with dull gray; no buff on side of head. *Im.* — Upper parts streaked with black; under parts buffy white; breast and sides streaked with dark grayish-brown.

Nest, in the grass on the ground. *Eggs*, white, speckled with reddish-brown, especially at the larger end.

The salt marshes along the sea-coast from Point Judith, R. I., southward, are inhabited by the Seaside Sparrow as

well as by the Sharp-tailed Sparrow, while north of Rhode Island only the latter is found. Both species inhabit the marshes along the Arthur Kill, on Staten Island. The Seaside Sparrows arrive in May, and can be found in the marshes till October, but the breeding season, June and July, is the best time to visit them, for then they and their relatives, the Sharp-tailed Sparrows, are found well out in the marsh, and hardly any other species of Sparrow with them. The grass, too, is short, and progress not difficult. As one looks over the level expanse, small birds are seen flying jerkily up and dropping down again a short distance beyond. Occasionally one flies to a considerable height, and sings as he drops back. The birds cling to the coarse grass along the tidal streams or ditches, or to the old stalks of high-tide bushes (*Iva*). Here they utter their feeble trisyllabic song, the last syllable a wheeze.

FIG. 47. Seaside Sparrow

From their relatives the Sharp-tails they may be easily distinguished by their dark gray look, due to the absence of buff on the sides of the head; the Sharp-tails have so much buff about the head that they are almost bright colored. From the Swamp Sparrows, which also have a white throat, the gray look and the absence of rich reddish-brown on the flanks should distinguish them; note, too, the Seaside Sparrow's long bill. There are generally Long-billed Marsh Wrens associated with the Seaside Sparrows in the coarse grass along the ditches, but the Wrens are smaller birds, and they cock their tails over their backs with an absurd effect.

SHARP-TAILED SPARROW. *Ammodramus caudacutus*

5.85

Ad. — Top of head dark brown, with an indistinct gray line through the centre; back brown, the feathers margined with whitish; *line over eye* and for some distance behind it *buffy*, separated from a *buffy stripe alongside of throat* by an ash-gray cheek-patch; under parts washed with buffy (except in midsummer), *breast and sides streaked with black;* tail-feathers narrow and pointed, the middle pair the longest. *Im. in summer.* — Under parts buffy, with very indistinct streaking on the breast.

Nest, of grasses on the ground. *Eggs*, pale blue, finely speckled with reddish.

The Sharp-tailed Sparrow is a common, though somewhat local, summer resident of extensive salt marshes along the coast of New York and New England, such as occur along the Arthur Kill, on Staten Island, and at Revere and Ipswich, Mass. It arrives in May, and stays till October. The tall coarse grass (*Spartina*), called thatch in New England, which grows along the tidal creeks and ditches, is its favorite haunt. When perching, it grasps the stalk with feet widespread, or, when startled, dives down, perhaps to appear on the top of another patch. When feeding in the shorter grass, it runs with head down, like a Savannah Sparrow, or stands high on its stout legs.

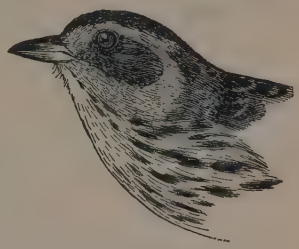


FIG. 48. Sharp-tailed Sparrow

Its song is simple and unmusical; Dr. Townsend has well described it as like "the hiss of hot iron in water." The male, when singing, frequently mounts a short distance into the air, but more often sings from the top of the grass, or from some post.

It is to be recognized by its rather long bill and by its narrow tail, not square like a Savannah's, but with the middle feathers longest, but chiefly by the *buffy line over the eye*

and along the sides of the throat. Birds seen from June to the middle of September all have streaked breasts; and this streaking and the buffy cheeks distinguish them from their relatives and companions the Seaside Sparrows. (See preceding species.) Young birds have less streaking than the adults, but are much yellower below than the Seaside Sparrows.

NOTE. — There is another species of Sharp-tailed Sparrow, the Acadian (*Ammodramus nelsoni subvirgatus*), which inhabits the salt marshes of New Brunswick, and has been found breeding in Sagadahoc County, Me. It occurs on the rest of the New England coast as a spring and fall migrant in May and October, but resembles the preceding species so closely that only a trained observer, viewing the bird at close range, could distinguish it. A third subspecies (*Ammodramus nelsoni*) also occurs in October.

HENSLOW'S SPARROW. *Ammodramus henslowii*

5.00

Ad. — Upper parts dark brown, streaked with blackish; under parts whitish, *narrowly streaked with black* on breast and sides; tail short and narrow; bill heavy.

Nest, on ground. *Eggs*, grayish-white, thickly speckled with pale brown.

Henslow's Sparrow is a rare summer resident of southern and central New England, arriving in May and leaving in August. It is an extremely local bird, occurring in southern New England in extensive wet meadows along sluggish streams, and in Berkshire County and in southern New Hampshire in the ill-drained hillsides on the upland, where the wet, neglected pastures are partially overgrown with spiræa, or the shrubby cinquefoil. From May to early August one can hear from such meadows or pastures one of the simplest

FIG. 49. Henslow's Sparrow

bird-songs, two syllables, *flee'-sic*, delivered almost as one. The notes are sharp and carry a long distance, nor do they sound much more penetrating when one is almost upon the singer as he crouches on a low bush or plant. Like several of its relatives, the Henslow's Sparrow prefers, when disturbed, to hide silently in the grass, or to fly but a few rods and then drop into the grass, where it runs or squats. Its *narrowly streaked breast* and absurdly large beak should identify it.

Grasshopper Sparrow. *Coturniculus savannarum passerinus*

5.38

Ad. — Upper parts streaked with black, rich chestnut, and gray; line through the crown buff; *under parts buffy, unstreaked. Im.* — Breast spotted with blackish.

Nest, on the ground. *Eggs*, white, spotted with reddish-brown.

The Grasshopper Sparrow is a common summer resident of southern New England and the lower Hudson Valley, but is rare in most of Massachusetts; in New Hampshire, it is found only here and there in or near the valleys of the Connecticut and the Merrimac, and in Maine it does not occur. It is common in certain sections of Massachusetts, as on the dry, sterile fields of Nantucket, or the extensive plains in the Connecticut and Sudbury valleys, where the ground is sandy and the grass not too luxuriant. The bird arrives late in April or early in May, and remains till September.

Fig. 50. Grasshopper Sparrow

It utters its insect-like song from some tall weed or low

post, and sometimes from the very ground. The song is so shrill that it takes a sharp ear to catch it. It is almost exactly like the stridulation of the green grasshopper, common in low grass-land (*Orchelimum vulgare*), *tsick, tsick, tsurrrrrrr.* The call-note consists of two notes, *tillic,* almost run together into one. The flight of the male from his singing perch is curiously feeble and fluttering.

From other grass-loving sparrows, the buffy unstreaked under parts should distinguish it.

Savanna Sparrow; Savannah Sparrow. *Passerculus sandwichensis savanna*

5.68

Ad. — Upper parts brown, streaked with blackish; a *yellow* line over each eye, and a narrow white stripe through the centre of the crown; breast and sides rather narrowly streaked; the spot in the centre of the breast and on the sides of the throat not so prominent as in the Song Sparrow; *tail rather short;* legs and feet pale pink. *Im.* — No yellow over eye.

Nest, on the ground. *Eggs,* bluish-white, thickly marked with reddish-brown.

The Savannah Sparrow is a common summer resident of the upland meadows of Berkshire County, Mass., and of northern New England and New York. It also breeds commonly on the edges of extensive salt meadows along the New England coast, north of Long Island Sound, and on the wide alluvial meadows of certain rivers, such as the Concord and the Connecticut. Through southern New England and the lower Hudson Valley it occurs chiefly as a migrant, common in April and early May, and again in September and October. It should then be looked for in grassy fields, particularly near the sea-shore, or along the larger streams.

The Savannah Sparrow, unlike most migrants, rarely sings during migration. On its breeding-ground the song

continues through July. The song is unlike those of the Vesper Sparrow and the Song Sparrow, but might be confused with that of the Grasshopper Sparrow. It is uttered from a rock or a low post, and consists of two or three preliminary chips, followed by two long insect-like trills, the second in a little lower key than the first, *tsip, tsip, tsip, tseeeeeeee tsee-ee-ee-ee.* The Grasshopper Sparrow's song is drier, less musical, and the trill is all on one note (see p. 169). When the birds have young about, they are very watchful, and observe an intruder by the hour, continually uttering a sharp *tsup.* When two birds quarrel, they utter a harsh *bsss.* The appearance of the Savannah Sparrow's head, as the bird faces one, should distinguish it from the Song Sparrow and the Vesper Sparrow; the *white median line* and the *yellow lines over the eyes* give the head a striped appearance, quite distinct from that of the other two species. The *shortness of its tail*, too, is apparent when it flies; after a short nervous flight it drops into the grass, where it runs along or squats motionless.

Ipswich Sparrow. *Passerculus princeps*

6.25

Ad. in spring. — Spot before the eye yellow; line over eye white; upper parts *pale gray*, streaked on the head with black, on the back with brown; throat and belly white; breast and sides streaked with brown; legs and feet pale pink. *Ad. in winter.* — Similar, but without the yellow before the eye.

The Ipswich Sparrow is a migrant and winter visitant along the sea-coast of New England and New York, commoner during the migration than in winter. It arrives in November and stays till the first week of April. At all seasons it is confined to extensive stretches of beach-grass, such as occur at Ipswich, Mass., on Cape Cod, and on Long Island; occasionally it comes down to the beach and feeds there with Shore Larks and Snow Buntings. One can flush

it by walking through the beach-grass; after a hurried flight it dives down again into the grass, and either crouches under a tuft of grass, or runs low from one bit of cover to the next. Its note is a faint *tsip*.

Its general aspect is that of a *large, pale* Savannah Sparrow, and care must be taken to distinguish it from this species, which is often abundant in the beach-grass.

Vesper Sparrow; Bay-winged Bunting. *Poœcetes gramineus*

6.12

Ad. — Upper parts grayish brown, streaked with dark brown; breast and sides rather narrowly streaked, the streaks often forming a spot in the centre; sides of the throat narrowly streaked: cheek washed with buff; bend of wing bay; *outer pair of tail-feathers mostly white*, the next partly white.

Nest, in a depression in grass or under a clump of plants. *Eggs*, dull white, buffy, or pinkish buffy, stained and speckled with reddish-brown.

The Vesper Sparrow is a common summer resident of New York and New England, though absent, of course, in the heavily forested regions of northern New England. Even here it appears in the upper valleys as soon as clearings are made and grass-land becomes extensive. The Vesper Sparrow arrives in early April, and stays till the middle or end of October. It frequents short-cropped pasture land, and the edges of cultivated fields. Here from a rock, a fence, or the limb of a tree, it sings its song, so often repeated toward evening that it has won for the bird its name.

Fig. 51. Vesper Sparrow

Beginners have much difficulty in distinguishing the song of this sparrow from that of the Song Sparrow. The opening notes of the latter are very various, but are almost always three, rather brisk and high. Those of the Vesper Sparrow are two, low, long, and sweet; then after two higher notes the song runs off into a succession of trills, not musical in themselves, but aiding in giving the whole performance more dignity and sweetness than the Song Sparrow's livelier effort. The time is distinctly slower, and the whole number of notes greater than in the Song Sparrow's song. In certain regions the first of the opening notes is omitted, as in Berkshire County, Mass., and northern New England, or they are modified, as on Nantucket, where they resemble those of the Field Sparrow.

To distinguish between the Vesper Sparrow and the Song Sparrow, observe, if possible, the *white outer tail-feathers* of the former; these, however, are often not clearly visible, — the bird must spread its tail fully to show them. One may also note the grayer shade of the Vesper Sparrow's brown, the *dusky cheek-patch*, and the absence at the sides of the throat of the reddish-brown marks, which on the Song Sparrow form a triangle with the dark breast-spot. The Vesper Sparrow is a less nervous bird than the Song Sparrow; it often runs or squats before one, either in the road, where it dusts itself like a hen, or in the grass; the Song Sparrow darts with a jerk of its tail into the nearest bushes.

Lapland Longspur. *Calcarius lapponicus*

6.25

Ad. ♂ *in autumn.* — Top of head and back brown, streaked with black; sides of head and line behind eye buffy; reddish-chestnut collar on hind neck obscured by gray; wings chestnut, with two white bars; tail nearly black, outer pair of feathers tipped with white; black feathers of the breast and sides veiled with gray; belly white. *Ad.* ♀ *in autumn.* — Similar, but with

less black on the upper parts, and on the breast ; no buffy line back of eye ; often no reddish-brown on the hind neck.

The Lapland Longspur is a very rare winter visitant along the sea-coast in the neighborhood of New York city, and a rare migrant along most of the New England coast. At Ipswich, Mass., on the grassy hills near the ocean, especially at Great Neck, it is often a common fall migrant. It arrives late in October and often stays into January. It feeds either in company with Horned Larks and Snow Buntings, or in small flocks alone. None of these birds hop ; all walk or run.

Its notes are a harsh and rattling *chirr*, less musical than the roll of the Snow Bunting, and a sweet *tyee*, which corresponds to the *tee* of the Bunting. If one is thoroughly familiar with the Lark and the Bunting, it is easy to distinguish the Longspur from them. The absence of a yellow throat-patch outlined with black separates it from the Lark, and its general dark tone distinguishes it from the Bunting. In fact, the reddish-brown wings and blackish breast suggest an immature male English Sparrow.

Snowflake ; Snow Bunting. *Passerina nivalis*

6.88

Ad. in autumn and winter. — Head and under parts white, washed on the head and sides of breast with brown ; the black feathers of the back veiled with gray and brown ; wings and tail black and white ; bill reddish-brown. *Im.* — Brown on the crown, and sides of throat deeper ; black of wings and tail not so clear, and white less pure. *Ad. in March.* — The brown begins to wear off, the plumage tending to become black and white.

The Snow Bunting is a common winter resident on the coast of New York and New England, and along the shore of Lake Champlain, arriving late in October and leaving toward the end of March. Occasionally large flocks appear in the interior, especially in northern New England, feeding

on the seeds of weeds in neglected fields and waste ground. It occurs also as a migrant in large river valleys, feeding on the muddy flats of lakes or ponds. On the sea-coast, flocks of Snow Buntings associate with Horned Larks, but the former frequent the beach more than their companions, and the grassy hills less.

The notes of the Snow Bunting are a high, sweet, though slightly mournful *tee* or *tee-oo*, a sweet rolling whistle, and a harsh *bzz*. The great amount of white about the bird serves to distinguish it; the white in the wing is especially conspicuous, as it flies over. On the ground it either walks or runs.

European Goldfinch. *Carduelis carduelis*

5.50

Ad. — Region about the base of the bill bright red; top of the head and a stripe down the side of the neck black; sides of head white; back brown; rump white; wings and tail black, the former crossed by a *broad band of bright yellow;* under parts dull white, sides brown; bill reddish-white, tipped with black.

Nest, a neat cup, in bushes or small trees. *Eggs*, bluish-white or greenish-white, marked with purplish around the larger end.

The European Goldfinch has been introduced in the neighborhood of New York city, and seems to have become permanently established in Central Park and other favorable places in the upper part of the city. It is resident throughout the year; in the neighborhood of Boston it occurs rarely. It is restless and active, flies like our Goldfinch in undulations, but is more at home in trees than on the ground.

A common note is like the syllables *steeglit*. It may easily be known by the broad *band of yellow* across the black wing. Its under parts are white, unstreaked, while the Pine Siskin, which has a smaller yellow bar across the wing, is everywhere streaked.

Pine Siskin; Pine Finch. *Spinus pinus*

5.00

Ad. — Upper parts grayish-brown, streaked with black; *a yellow bar across the wing*, partly concealed by a whitish wing-bar; bases of tail-feathers sulphur-yellow, these and the wing-patch showing in flight; under parts gray, streaked with brownish; bill sharply pointed.

Nest, in coniferous trees. *Eggs*, pale greenish blue, speckled chiefly around the larger end with reddish brown.

The Pine Siskin is an abundant resident of the great coniferous forests of northern New England and New York.

Fig. 52. Pine Siskin

Occasionally it moves southward in great flocks, and spends the winter in southern New England and New York, often in company with Crossbills and Redpolls. An occasional migrant flock or single bird generally appears in October, and in April or May. The Siskin, like the other northern finches, is restless and yet fearless. It occasionally feeds on the ground, and may then be approached almost within reach. It generally feeds on the seeds of birches, and on those of pines and spruces, clinging easily to the twigs or cones.

The common call-note resembles the syllables *chee-ee* given in a husky tone; when flying it utters a note like the syllables *tit-i-tit*. Another very sweet call, often given by a single bird to call back the flock, is identical with a note of the American Goldfinch. The song heard even in March in the depths of the spruce forests is a rather formless succession of sweet notes, varied occasionally by a screeching note, like the noise made by blowing through a comb covered by paper.

Siskins may be told from Goldfinches, with which they often associate, by the *thick streaking* over the *entire under parts*, and from Redpolls by the thicker streaking on

the belly, and by the absence of the blackish throat. (See Fig. 53.)

American Goldfinch. *Astragalinus tristis*

5.10

Ad. ♂. — Crown black; body bright yellow; wings and tail black, spotted with white. *Ad.* ♀. — Upper parts brownish-olive; under parts yellowish, with a dusky wash on the throat and breast; wings and tail like the male's, but duller. ♂ *in winter.* — Like the female, but with black-and-white wings and tail. *Im.* — Like winter adults, but browner, the wing-markings brownish instead of white.

Nest, a gray cup, lined with down, placed in fork from five to thirty feet up. *Eggs,* white.

The Goldfinch is a common permanent resident of New England and New York. As winter approaches, flocks, sometimes of over fifty birds, gather together and wander about, feeding on the seeds of birches or on the seeds of weeds and grasses in neglected fields. At all seasons the birds are fond of the seeds of composite flowers; a gay company often scatter over the lawn and feed on dandelion heads; bachelor's buttons, thistles, and sunflowers also attract them. By May the males have recovered their yellow and black, and begun to twitter their sweet if rather characterless song. They are still in flocks, even when other birds are building. By June, however, they are met with in pairs, the dark female with the bright male, and by July they are building in the sugar maples or apple-trees.

While the female is brooding the male goes swinging over in deep undulations, calling *te tee' de de,* and she answers with a simple *te' de dee, te' de dee.* When the male sings on the wing, he flies around in circles, with broad, fluttering wings, and keeping the same level; but the ordinary flight is undulating, and in midsummer the male often seems to accent the curve, as if enjoying the great plunge through the air. The voice is always sweet; one call-note is very like a call of the Canary, *swee-ee,* with a

rising inflection. The young bird, just out of the nest, has a peculiar call, *chi-pee'*, a characteristic sound in late summer.

Goldfinches often associate with Redpolls and Siskins, when these visit southern New England, but may be distinguished from them at all seasons by the black and white in the wings and tail, and by their unstreaked breasts. The winter plumage of the male is very different from the bright yellow and black of spring, but there is always a tinge of yellow on the throat.

Redpoll. *Acanthis linaria*

5.32

Ad. ♂. — Crown crimson; back streaked with gray and brown; *middle of throat blackish;* rump slightly tinged with pink; breast and upper belly suffused with rose; sides streaked with brown. *Ad.* ♀. — Similar, but no rose on rump or breast. *Im.* — Similar to ♀, but without crimson crown.

The Redpoll is a very irregular winter visitant in southern New York and New England, often absent for periods of from five to ten years. In northern New England it occurs more frequently. It varies, too, in abundance, occurring at times in large flocks, and throughout the country, at other times in small flocks, and only here and there. It frequents neglected fields, feeding on the seeds of weeds and grasses, or visits groves of birch, picking the seeds from the ripe catkins. It is often found near the sea beaches.

Fig. 53. Redpoll

The Redpoll has a sweet call-note, almost identical with a note used both by the Goldfinch and by the Pine Siskin.

It also utters, especially when flying in flocks, a rattling note, like the syllables *tshŭ, tshŭ, tshŭ.*

A flock is generally composed of birds in many stages of plumage; some show no red, others have only a small dark red cap, still others have a suffusion of rose over the breast as well. They may be distinguished from the Pine Siskins, with which they are often associated, by their grayer tone, by the smaller amount of streaking on the under parts, and by the *blackish throat.*

White-winged Crossbill. *Loxia leucoptera*

6.05

Ad. ♂. — Head, rump, and under parts rose-red; middle of back black, streaked with rose; wings and tail black; two broad *bars on the wing white;* tips of the mandibles crossed. *Ad.* ♀ and *Im.* — The red of the ♂ replaced by gray, tinged with olive-yellow, and streaked with black; rump yellow; wings and tail almost black; wing-bars as in male. *Im.* ♂. — Often shows stages between the plumages of the *ad.* ♀ and ♂.

Nest, in coniferous trees. *Eggs,* pale greenish, dotted about the larger end with brown.

The White-winged Crossbill is a very irregular winter visitant in southern New York and New England, often absent for a period of many years. In northern New England and in the Adirondacks, it breeds sparingly, and is a not infrequent winter visitant in the valleys. Its call-note is a sweet monosyllable, resembling the syl-

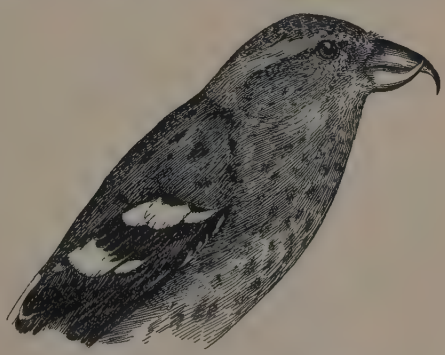


Fig. 54. White-winged Crossbill

lable *peet*. It has also a chattering note, uttered when it flies. Its disposition and habits are similar to those of the Red Crossbill, from which it may always be distinguished by the presence of conspicuous *white wing-bars*. The red of the adult male is a rose-red, different from the vermilion-red of the Red Crossbill.

American Crossbill; Red Crossbill. *Loxia curvirostra minor*

6.19

Ad. ♂. — Entire body dull vermilion-red, brightest on head, rump, and belly; wings and tail dark; tips of the mandibles crossed. *Ad.* ♀ and *Im.* — Entire body gray, with a greenish wash on the breast; rump greenish-yellow.

Nest, in coniferous trees. *Eggs*, pale-greenish, spotted with purplish-brown.

The Red Crossbill is a common permanent resident of the coniferous forests of northern New England. A few Crossbills may be seen in any month of the year on the upland of Berkshire County, Mass., and in southern New Hampshire and Vermont (see map, p. 15), but in southern New England they are very irregular visitors, occurring abundantly in some winters, at other times being wholly absent, or appearing only as rare migrants in spring and fall. When they spend the winter in southern New England, they resort to the cone-bearing evergreens — the hemlocks, spruces, and pines — and feed on the seeds, hanging to the cones and forcing their scales apart, or later on in the season picking up the fallen seeds from the ground. They also extract the seeds from the rotten apples left on the trees. Like the other northern visitors they are very tame, but when startled often fly off to a distance. Their call-note, always uttered when flying, is a loud *kip-kip*, *kip-kip-kip*, very like a note made by young chickens. The song resembles the syllables *too-tee'*, *too-tee'*, *too-tee'*, *tee*, *tee'*, *tee*. (See preceding species.)

English Sparrow. *Passer domesticus*

6.33

Ad. ♂. — Top of head grayish; a patch of chestnut on each side of the head; back brown, streaked with black; wing-bars white; a stripe of chestnut on each wing; *throat and upper breast black;* rest of under parts grayish-white. *Ad.* ♀. — Head grayish-brown; back streaked with black and buff; under parts whitish; breast washed with grayish-brown.

Nest, either in trees, or in a hole or corner. *Eggs*, generally white, sometimes brownish, finely speckled with brown or gray.

The English Sparrow is now a permanent resident of nearly every city, town, and village in New York and New England. Only the wilder or more hilly portions of northern New England are still free from its presence. In many suburbs it occupies the boxes and holes which otherwise Bluebirds, Wrens, and White-bellied Swallows would use. It also annoys Robins by following the parents when they are collecting food for their young and stealing it from out of their bills. At night Sparrows roost in thick trees or vines, and in large cities collect in astonishing numbers in small parks. In the country small flocks often collect in brush-heaps.

The Sparrow's voice is harsh, and too suggestive of the city to please most ears. Its ordinary note is the well-known *chirp*, but it has an astonishingly large number of modifications of this note. In spring, or on warm days in winter, the male utters a cry, like the syllables *fee-leep*, with a persistence worthy of a better cause. The chunkiness of the Sparrow, the unstreaked dingy-white breast of the female, and the black throat of the male, will serve to identify it to any one who is so fortunate as to be unacquainted with it.

Purple Finch. *Carpodacus purpureus*

6.22

Ad. ♂. — Entire body suffused with *rose-red*, strongest on the head, rump, and throat; back streaked with brownish; belly gray-

ish; wings and tail brownish; tail rather deeply forked. *Ad.* ♀ and *Im.* — Upper parts grayish-brown, streaked; under parts grayish, streaked with brown; *line behind eye gray.* ♂ in first breeding season, like the female.

Nest, in evergreens, five to thirty feet up. *Eggs,* blue, spotted at large end with brownish.

The Purple Finch is a permanent resident of New England and New York, but of irregular occurrence in winter, sometimes very rare, often rather common. In southern New England and the lower Hudson Valley, it is a common migrant in April, and in September and October, but few remain through the summer. In New England the summer residents arrive in April and stay until October.

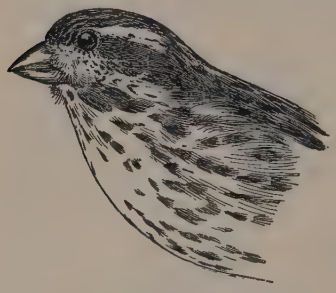


Fig. 55. Purple Finch, Female

They are found, in winter, either in cedar groves or in hard wood, near groves of hop hornbeam, but they are active, restless birds, and may be heard anywhere flying overhead. In spring they frequent the same places, but come also to the evergreens about houses, and to the elms in the street, the swelling buds of which they bite off. In summer they build chiefly in conifers, and are numerous in the great northern forests. They utter, when flying, a single sharp *pit,* by which they may be easily identified.

Their song is vigorous and musical, a rapid, energetic warble, often lengthened in the height of the mating season to a long, passionate utterance (see Warbling Vireo, p. 135). The male at this season walks, or rather dances, about the female, with wings spread and quivering, repeating the song in a low, pleading tone, or he flies off singing in the air in his loudest tones. A call-note, resembling the

syllables *pĕ-wee'*, is given by both sexes, and it is known that the female occasionally sings, though often when the song seems to be uttered by a female, the singer is really a male of the preceding summer. The large bill of the female should distinguish her from any brown, streaked sparrow.

CANADIAN PINE GROSBEAK. *Pinicola enucleator leucura*

9.08

Ad. ♂. — Entire body *rose-red*, brightest on head and rump; middle of back spotted with black; wings brownish-black, with *white wing-bars;* tail brownish-black; bill short and stout; tail deeply forked. *Ad.* ♀ and *Im.* — Top of head, rump, and sometimes the breast, washed with saffron or reddish; rest of body dark gray; wings and tail as in male.

Nest, rather flat, of rootlets, in coniferous trees. *Eggs*, greenish or bluish, spotted with brown.

The Pine Grosbeak is a very irregular winter visitor in southern New York and New England, often absent for periods of several years, occasionally appearing in very large flocks, at other times less abundantly. The first flocks generally arrive in November or December, and all leave southern New England for the north before April. In western and northern New England it occurs less irregularly. A few birds breed on the high mountains of northern New England and in the vicinity of the Connecticut Lakes. When the Pine Grosbeak visits southern New England, it is remarkably unsuspicious, allowing people to approach almost near enough to touch it. It feeds on the fruit of the mountain ash, on cedar berries, on seeds of the white ash, and, towards spring, on the buds of pine, spruce, and maple. There are generally several red males in a large flock of grayish birds.

The common call of the Pine Grosbeak consists of two or three clear whistled notes, that suggest the notes of the Greater Yellow-legs; they may be written *tee-ti, tee'-tee-ti,*

the last note lower than the others. They often utter a sharp *peer*, something like the cry of a Blue Jay; while the birds are feeding they utter a low musical twitter, and, when flying up suddenly, a low trilled whistle.

The size, the undulating flight, the short, stout bill, and the white wing-bars serve to identify the gray birds; the red ones are unmistakable.

BLACKBIRDS, ORIOLES, ETC.: FAMILY ICTERIDÆ

The eight members of the family Icteridae differ widely in appearance and habits. The two Orioles are rarely seen on the ground; when they do come down, they hop. All the other species get their food chiefly on the ground, and these all walk. In four of the eight species black predominates; these species are gregarious, often occurring in very large flocks. The Orchard Oriole is found commonly only as far north as southern Rhode Island and Connecticut. The Rusty Blackbird is only a migrant in most of New York and New England.

BRONZED GRACKLE. *Quiscalus quiscula æneus*
PURPLE GRACKLE. *Quiscalus quiscula*
} CROW BLACKBIRD

12.00–13.50

Ad. ♂. — Head, neck, and upper breast iridescent purple, violet, or brassy-green in good light (at a distance *the whole bird looks black*); rest of body black, with metallic reflections; wings and tail bluish, violet, or purplish; tail long, *middle pair of feathers much longer* than outer pair; eye pale yellow. *Ad.* ♀. — Similar, but browner and smaller.

Nest, bulky, of dried grasses, etc., in trees. *Eggs*, greenish, spotted and streaked with black and brown.

The Crow Blackbird is a summer resident throughout New York and New England, but in northern New England

occurs only locally in low ground near water. It arrives late in February, or early in March, and stays occasionally as late as October. When the Blackbirds first return, they come in flocks, and they breed in communities, preferring the security of evergreen trees for nesting-places. Here they may be seen on the tops of the trees squeaking and whistling like creaking sign-boards. When the

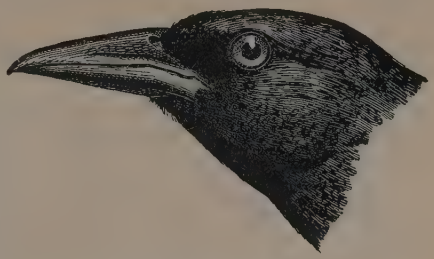


Fig. 56. Bronzed Grackle

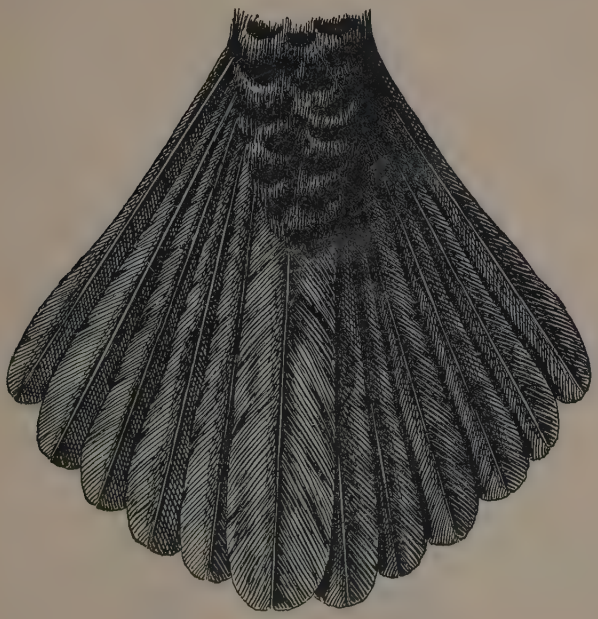


Fig. 57. Tail of Bronzed Grackle

male utters his song, he spreads his wings slightly and puffs out his feathers. When the young are in the nest, the female, a little smaller and duller than the male, may be seen walking over lawns or open places in the neighborhood, hunting for grubs or bits of refuse, and then flying to the nests. From all the surrounding country, lines of such foragers converge in the chosen grove in midsummer. After the young are able to fly, the breeding-places are deserted, and either no Grackles are to be seen or else very large flocks are met with, blackening the fields or trees. Sometimes these flocks, or migrants from the north, are seen late in October, and occasionally in November.

The absence of red on the shoulder distinguishes the Crow Blackbird from the Red-wing, and the long, wedge-shaped tail, conspicuous in flight, from the Rusty Blackbird. This tail is often held keel-shaped, the middle feathers being depressed. On the ground the bird somewhat suggests a Crow; the gait, as in the case of all the blackbirds, is a walk. When Crow Blackbirds fly, their line of flight is level, not undulating, so that the members of a flock do not rise and fall as the other blackbirds do. Like several of the other blackbirds, it often jerks its tail upward when perched.

NOTE. — The Crow Blackbird, in the neighborhood of New York city, is the Purple Grackle (*Quiscalus quiscula*); about Boston and northward it is the Bronzed Grackle (*Quiscalus quiscula æneus*). In the former the colors of the head and neck are not sharply defined from those of the body, as they are in the latter. In Connecticut intermediate races occur. The habits and notes of the two are practically the same.

RUSTY BLACKBIRD. *Euphagus carolinus*

9.55

Ad. ♂ in spring. — Entire plumage glossy bluish-black; *eye pale yellow or white. Ad. ♀ in spring.* — Slate-gray; eye as in ♂. *Ad. in autumn.* — Feathers of head, neck, and back tipped with rusty-brown; under parts buffy.

Nest, in trees, bulky. *Eggs*, bluish-green, olive, or brownish, speckled and spotted with brown.

The Rusty Blackbird (rusty only in the autumn) is a common migrant through New York and New England, from the middle of March to the first week of May, and again from the end of September through October, or in the vicinity of New York city until December. It breeds to some extent in the northern and extreme eastern counties of Maine. The Rusty Blackbird is as fond of wet places as the Red-wing; it is generally found in small flocks near marshes and at the borders of water-courses. Like the Red-wing, it visits to some extent the dry hillsides, particularly in the fall.

When seen at a distance, and in flight, it is almost impossible to distinguish between this bird and the Red-wing, unless the split or squeaking whistle of the Rusty is heard. This is its song, corresponding to the *congaree* of the Red-wing; it is heard both in spring and fall. The species also has a *chuck* practically indistinguishable from that of the Red-wing, and has the same trick of jerking its tail upward when perched. When seen near to, the absence of any mark on the shoulder should distinguish the Rusty; the tail, though slightly rounded, can hardly be confused with the long, extremely rounded tail of the Bronzed Grackle. The surest mark by which the Rusty may be distinguished from the Red-wing, if one can get near enough, is the *white eye*. The female might be confused with the female Cowbird, but in most cases the latter would not occur in the wet places affected by the former; moreover the Cowbird's bill is shorter. The female Red-wing is heavily streaked. A Rusty Blackbird in autumn might be mistaken for a male Cowbird, but the rusty is much more widely distributed in the former, extending well down the back, and the bill is longer and sharper.

Baltimore Oriole. *Icterus galbula*

7.53

Ad. ♂. — Head, throat, upper back, wings, and tail black; wing-feathers margined with white; tips of outer tail-feathers yellow for nearly half their length; *lower back, breast, and belly, reddish-orange. Ad.* ♀. — Black of the male much duller; rump, breast, and belly yellow; throat often spotted with blackish; tail grayish-orange. *Im.* — Similar to the ♀.

Nest, a pocket composed of tough fibres or string, hung from the tips of pendulous twigs, commonly of elms, or sometimes close to the upright stem of small trees. *Eggs*, white, scrawled with irregular lines of brown or black.

The Baltimore Oriole is a common summer resident of southern and central New England, and the lower Hudson Valley. In the upland of northern New England and New York, the Oriole is confined to the village streets in the more settled valleys; in the forested region of the north it is wholly absent. It arrives early in May, and stays till about the first of September.

All through May and early June Orioles are active and musical, flashing through the trees and whistling, now a single note, now a phrase or two. By the middle of June the young begin to call from their hanging nest, and their crying is then incessant, and resembles the syllables *tee'-dee-dee, tee'-dee-dee*. Some time in July the old Orioles moult, and are then quiet and retiring; after the moult the male whistles again, especially early in the morning, and continues to sing till his departure. The female during the mating season whistles two or three notes similar to the male's. Both sexes utter a long chatter when excited. The question is often asked whether the Oriole ever uses the same nest a second season. I have never observed such an instance, but it is a very common sight to see a new nest built only a few feet from the old one, or sometimes even the tattered remains of the nest of two years before on still a third twig.

It is a common error in central New England to imagine that a dull-colored oriole seen in an orchard is the Orchard Oriole; the latter occurs commonly only in southern New England and in the lower Hudson Valley. (See following species.)

Orchard Oriole. *Icterus spurius*

7.32

Ad. ♂. — Head, throat, and upper back black; *lower back, breast, and belly chestnut;* wings dark brown, tail almost black. *Im.* ♂ *in second year.* — Upper parts greenish-yellow, brightest on the rump; tail brown, tinged with greenish-yellow; *throat black;* under parts yellow. *Ad.* ♀. — Similar to *Im.* ♂, but throat yellow; back browner.

Nest, a deep cup made of long green grass-blades, hung generally in apple-trees ten to fifteen feet up. *Eggs,* bluish white, spotted and scrawled with black or brown.

The Orchard Oriole is a common summer resident of southern Connecticut and the lower Hudson Valley; in eastern Massachusetts it is a rare summer resident as far north as Ipswich. It is not uncommon in the valleys of the Connecticut and Housatonic, as far north as Springfield and Pittsfield, though it is far less common everywhere in Massachusetts than the Baltimore Oriole. In northern New England the Orchard Oriole does not occur. It arrives early in May, and leaves in August. The Orchard Oriole, as its name suggests, frequents apple orchards, but it is often found in low shade-trees.

The song is very different from that of the Baltimore Oriole; it is not made up of separate whistled phrases, but is a definite outburst of musical notes. It recalls the richness of the Fox Sparrow and the energy of the Purple Finch. The call-note of the Orchard Oriole suggests the *chuck* of a Blackbird; it has also a chatter resembling that of the Cowbird.

A bird in the adult plumage of chestnut and black is

unmistakable, but the males in the second year and the females may be confused with female Baltimore Orioles; the greenish tinge of the upper parts should distinguish the female Orchard Oriole, while the *pure black throat* of the young male should identify him.

Meadowlark. *Sturnella magna*

10.75

Ad. — Upper parts brown, streaked with black; line through crown buffy; line from eye to bill yellow; throat and belly bright yellow; black crescent on breast; tail-feathers short and narrow, *outer ones white*. *Ad. in winter.* — Upper parts a redder brown; black and yellow of under parts veiled with buff and reddish-brown. *Im.* — Yellow of breast much paler; black crescent replaced by a few dark streaks.

Nest, on ground, of dry grass, sometimes arched over. *Eggs*, white, speckled with reddish-brown.

In southern New England and in the lower Hudson Valley, wherever the ground is fairly free from snow, particularly on salt marshes, the Meadowlark spends the winter in small flocks. The clear whistled notes of the bird may there be heard in every month of the year. But in the interior the Meadowlark is only a summer resident, and in northern New England it is rare or absent. It frequents wide stretches of grass-land, associating either with Bobolinks in rich meadows or with Grasshopper Sparrows in dry fields; at all seasons it is common on salt marshes.

Its ordinary song is a clear, rather plaintive whistle, uttered from the top of a tree, or a fence, and often in the air; it has besides a harsh guttural chatter, and a nasal *peent*. In the breeding season the Meadowlark indulges occasionally in a flight-song, more prolonged, but less clear than its usual whistle. The *yellow breast* and the *black crescent* do not often show; the bird commonly keeps his back to observers. The legs are long and stout, and the bird spends much time on the ground, where it *walks*.

Though about the size of the Flicker, it can readily be distinguished by its flight; after a few strokes it sails a short distance, then repeats the few strokes, then sets its wings and sails again. When it flies up from the ground, the *white outer tail-feathers* are a conspicuous mark; as the bird walks on the ground, its short tail is often nervously opened, so that the white feathers show.

Red-winged Blackbird. *Agelaius phœniceus*

♂ 9.51. ♀ 8.00

Ad. ♂. — Entire plumage black, showing in flight a bright *scarlet* patch edged with buff and white, at the *bend* of the *wing*; often only the white edging shows when the wing is closed. *Ad.* ♀ and *Im.* — Brown, everywhere streaked; throat often buffy.

Nest, of grasses and weed-stalks, in a low bush or on a tussock of sedge. *Eggs*, pale blue, scrawled and spotted with dark purple or black.

The Red-winged Blackbird is a common summer resident of the Hudson Valley and of southern and central New York; in northern New England, especially on the upland, it is much less common. Occasionally a few Red-wings winter in the marshes near Boston, and may do so in favorable localities in southern New England. The male arrives early in March, but it is often three weeks before the female joins him. When the young are full grown, the breeding birds depart and are rarely seen after August. Flocks of northern migrants often arrive in September and linger till October, and on mild days sing in chorus, though without the vigor of spring.

Fig. 58. Red-winged Blackbird, Female

At first, while the marshes are still cold, the hillsides are visited by flocks of males, and here they may often be seen feeding on the ground with Robins, or in a noisy chorus on some tree near by. The song has a liquid opening-note, and ends in a *ree* or *ray*, long prolonged; when uttering it, the male spreads his wings and shows his blazing scarlet epaulets. When a flock are singing, the liquid notes form a musical undertone to the shriller *ree*, the whole suggesting the music of waters. Besides the song, the species has a rather heavy *chuck*, used as a call-note, and a long, rather pure whistle, constantly heard in the marshes in early summer, and often followed by a series of staccato scolding-notes, and in midsummer a loud nasal dissyllabic note, suggesting the cry of the nighthawk. The birds are intolerant of intrusion, and gather round a visitor with much expostulation. They also attack and escort away any large birds — hawks, crows, and even inoffensive bitterns.

A male Red-wing is easily told by his scarlet wing-patch or even by its white edging, which shows when the wings are closed. A female differs from the other blackbirds in the heavy streaking above and below. (See Rusty Blackbird, p. 187.)

Cowbird. *Molothrus ater*

♂ 7.92. ♀ 7.50

Ad. ♂.—*Head, neck, and upper breast rich brown* (at a distance the bird seems entirely black); rest of plumage iridescent black. *Ad.* ♀ and *Im.* — Entire plumage brownish-gray, unstreaked.

Nest, none, the eggs being laid in the nests of other birds. *Eggs*, white, evenly speckled with brown.

The Cowbird is a summer resident of New York and New England, but is rare in the hilly country of northern New England, and entirely absent from the unsettled forest regions. It arrives late in March or early in April. In late

summer or early autumn the Cowbird is either absent or else occurs in large flocks, which occasionally linger through October. Cowbirds have several times been found in New York and New England in winter.

In spring flocks of two or three, or more, fly about in a restless fashion, and attract attention by a long, high whistle, followed by two shorter, lower notes. The bird's flight is unsteady, and it looks distinctly smaller on the wing than the Red-winged Blackbird, with which it often associates. When the flock lights on trees, the males spread wings and tail, lift the latter, extend the neck, and follow these absurd gestures by a feeble squeak. Both sexes have a harsh chatter. They make no nest, and by laying in the nest of smaller birds, force them to bring up their young. The young Cowbird is brownish-gray, and generally larger, by the time it leaves the nest, than the foster-parent that is feeding it.

In summer Cowbirds are often seen following cattle about, *walking* on the ground. They can then be readily distinguished from the much larger Crow Blackbirds by the short, stout bill, by the reddish-brown head of the male, and by the grayish-brown females in the flock. (See under Rusty Blackbird, p. 187.)

Bobolink. *Dolichonyx oryzivorus*

7.25

Ad. ♂. — Nape buffy-white ; shoulders and lower back white ; otherwise black. *Ad.* ♀. — Upper parts brown, streaked ; under parts yellowish-brown, unstreaked ; *line over eye and line through crown buffy.* ♂ *in August* and *Im.* — Similar to female, but yellower.

Nest, placed on the ground in some tuft of grass or weeds. *Eggs*, white, blotched with brown.

The Bobolink is a common summer resident throughout New England and New York, wherever there is grass-land,

though absent apparently from Cape Cod, and local in the vicinity of New York city. It arrives early in May, and stays till September. It breeds in mowing-land of grass or clover, and at the edges of grassy marshes. Here the males through May and June pour forth their rollicking song, either from the tops of the neighboring trees, or from some bending weed, or tuft of grass. Often they sing in the air, either gliding with curved wings or chasing each other furiously over the field. About the first week in July the young ones leave the nest, and now the song of the males ceases abruptly. If one approaches the grass where a young one is hiding, both parents hover near, uttering a *chuck* of alarm, flying from one perch to another, spreading the tail nervously. Towards the end of July the males begin to lose the black-and-white plumage; it is replaced by a dress similar to the female's, but yellower. About this time old and young gather in large flocks, which roost each night in the long grass of some low meadow. As they pass to and fro they utter a mellow *chink*, which is one of their ordinary call-notes; this note may be heard at night in August and early September from migrant flocks.

Fig. 59. Bobolink, Female

The young birds and the males in autumn may be known by their *unstreaked yellowish under parts*, and by the buffy line over the eye; in spring the presence of the brightly marked males will often help one to identify the plain-colored females.

STARLINGS : FAMILY STURNIDÆ

Starling. *Sturnus vulgaris*

8.50

Ad. ♂ in summer. — Entire body black, with green and purple reflections ; each feather of the back tipped with grayish-yellow ; bill yellow. *Ad. ♀.* — Plumage less brilliant ; buffy spots larger, especially below. *Ad. in winter.* — Spotting much more conspicuous ; light brown on upper parts, and whitish on under parts ; bill blackish. *Im.* — Grayish-brown.

Nest, in hollow trees, or in crevices in buildings. *Eggs,* pale greenish-blue or bluish-white.

The Starling has been introduced from Europe into Central Park, and has not only become well established there, but has spread to New Jersey, Staten Island, and along Long Island Sound. It is resident throughout the year. Starlings feed on the ground, where they walk after the manner of our blackbirds. In late summer and autumn they collect in flocks, which in Europe blacken the sky ; they now resort to the reeds in low ground. The male sings in early spring from the top of a tree, or on some building ; some of the notes are very sweet, others are harsh, and many are imitations of the surrounding noises.

CROWS, JAYS, ETC. : FAMILY CORVIDÆ

Fish Crow. *Corvus ossifragus*

16.00

Ad. — Entire bird black, with blue or purplish reflections at close range.

Nest, of sticks, in trees, generally in evergreens. *Eggs,* like those of the common Crow.

The Fish Crow is a common permanent resident of the lower Hudson Valley, and occurs regularly but not com-

monly along the coast of Connecticut, as far east as Stratford. It has been taken at Springfield, Mass., but is probably very rare north of Long Island Sound; in fact, it is almost always found near the sea or on large streams. Though the Fish Crow is smaller than the Common Crow, it is very difficult to distinguish it by the size alone, but its *car* is distinctive; it is higher, more nasal, and less powerful than the *caw* of the common Crow.

American Crow. *Corvus brachyrhynchos*

19.30

Ad. — **Entire bird black, with blue or purplish reflections when seen in strong light.**

Nest, **of sticks, in tall trees.** ***Eggs,*** **generally bluish-green, marked with brown.**

The Crow is a permanent resident of the warmer portions of New York and New England, but a summer resident of that portion only of the interior where the winter is not severe. Great numbers move to the coast at this season, and find food on the marshes and beaches. Each evening multitudes assemble and fly off to certain roosts several miles away; in the morning they return and scatter over the feeding-ground. In March long trains flying northward show that the migration has begun. Mating begins early in April; Crows are now seen pursuing each other in the air, turning and swooping with considerable grace. Besides the ordinary *caw*, and the many modifications of which it is capable, the Crow utters commonly two other striking notes. One is like a high-pitched laugh, *hă-ă-ă-ă-ă-ă;* the other a more guttural sound, like the gobble of a turkey, *cŏw cŏw cŏw*. Crows have a strong antipathy towards the larger hawks and owls, pursuing them sometimes in great flocks, and cawing vehemently each time the victim makes an attempt to escape his noisy escort.

Northern Raven. *Corvus corax principalis*

22.00–26.50

Ad. — Entire bird black ; the long feathers of the throat and the thick bill show only at close range.

Nest, of large sticks, lined with grass and wool, on cliffs or in trees. *Eggs*, bluish-green or olive, spotted with brown.

The Raven is a rare permanent resident of the coast of Maine, breeding on some of the small islands of Penobscot Bay. According to Mr. Brewster, it "regularly visits the interior of northern New England in late autumn and winter." It probably still occurs in the Adirondacks. In spite of its greater size, it is often difficult to distinguish it from a Crow, unless it utters its hoarse *curruck*.

Canada Jay. *Perisoreus canadensis*

12.00

Ad. — *Forehead*, sides of head, and throat *whitish ;* hind part of head dusky grayish ; back gray ; tail gray, feathers tipped with white. *Im.* — Entire plumage sooty-slate.

Nest, in coniferous trees, of twigs, bark, etc. *Eggs*, grayish or whitish, speckled with brown.

The Canada Jay is a permanent resident of the coniferous forests of northern New England and New York. It is especially common in autumn, but rarely appears far south of central New Hampshire and Vermont ; its presence in Massachusetts is accidental. It is noted for its fondness for meat, and in winter comes boldly about the logging-camps in its search for scraps of refuse. It is noisy, like its relative the Blue Jay, and has a variety of notes, many of which bear a strong family resemblance to its relative's. Its fluffy appearance and its pattern of coloration has suggested a comparison with a "magnified Chickadee" (Seton). The *white spot on the forehead* is the best recognition mark ; the bird has no crest.

Blue Jay. *Cyanocitta cristata*

11.74

Ad. — Upper parts grayish-blue; *head furnished with a crest*, which is often, however, depressed; *wings and tail bright blue*, with narrow black bars and *broad white spots;* throat gray; collar about breast and neck black; lower belly white.

Nest, placed in thick evergreen from five to twenty feet up. *Eggs*, greenish, spotted with brown.

The Blue Jay is a common permanent resident of New England and New York, but is most numerous in the autumn. It inhabits woodland of any sort, feeding in fall and winter on grain, acorns, and nuts; in spring and summer it lives largely on insects, but too often robs the nests of other birds of eggs or young. Though a noisy bird at times, a pair can be so silent about the nesting-site that the eggs will perhaps be laid before their presence is suspected. Their bright contrast, too, of blue and white, is not nearly so conspicuous in leafy shade as one might expect. Jays have a habit of hopping upward from one branch to the next till they reach the top of a tree. When flying through open spaces, they keep at almost an exact level, and may by this peculiarity of flight be recognized at some distance. Jays are very vigilant and give notice by their screams of the presence of an intruder; hawks and owls are frequently pursued by a noisy mob.

Fig. 60. Blue Jay

Their notes vary greatly; the commonest are the well-known strident *djay djay*, a higher and more prolonged *tee-ar tee-ar*, which exactly simulates the scream of the

Red-shouldered Hawk, a resonant, trumpet-like *teerr* and a *too-wheedle too-wheedle*, which suggests the creaking of a wheelbarrow. When uttering these sounds from a perch, Jays open the wings, and bend the head back and forth, like crows when cawing. They have also, in spring, low, sweet crooning notes. Many good observers believe that the Jay imitates the cries of various hawks, such as the Broad-winged and the Sparrow Hawk. The fact remains that even where the Red-shouldered Hawk is uncommon, the Jay frequently uses a note like his scream, so that it may be a part of his original repertoire, and not an imitation.

LARKS : FAMILY ALAUDIDÆ

Prairie Horned Lark. *Otocoris alpestris praticola*

7.25

Ad. — Similar to the following species but smaller, the throat white, or only tinged with yellow ; the *line over the eye pure white.* *Im.* — Lacks the black and yellow about the head ; breast washed with brownish buff, speckled with dusky.

Nest, on the ground. *Eggs*, pale olive or pale buffy, finely but thickly speckled with olive-brown.

The Prairie Horned Lark is a summer resident of northeastern New York, Berkshire County, Mass., and northern New England. It has been found in North Adams, Williamstown, Lanesboro, and Pittsfield in Berkshire County, at Hubbardston in Worcester County, and at Ipswich, Mass., at Franconia, Errol, and Shelburne, N. H., etc. It is apparently extending its range eastward, and will probably become commoner, and appear in new localities. It arrives in March and raises two broods, the first in April, the second in June. It frequents grassy hills or intervales, and feeds on the ground, walking or running.

It is restless, and often flies about, uttering a sharp *tsēē* or *tsēē-de-rēē*. Its song is uttered either on the ground, and

then consists of four or five introductory *twits*, followed by a little trill, all in a very sharp tone, or it is delivered after the bird has mounted, like his famous cousin, to a considerable height; it is then much longer, but still sharp and unmusical and lacking the strength of the Skylark.

The Prairie Horned Lark also occurs as a rare migrant in late October and November along the sea-coast of New England and New York, often in company with its relative the Shore Lark. It must not be confused with the small pale-colored females of the latter species, from which the *pure white line* over the eye will distinguish it.

Horned Lark; Shore Lark. *Otocoris alpestris*

7.75

Ad. ♂. — Forehead and patch back of eye yellow; "horns," or tufts of feathers projecting backward from the head, black; front and sides of crown, *line* from bill under eye *along sides of throat* and *band across upper breast black;* back of head, back, and rump pinkish-brown; tail dark, outer pair of feathers edged with white; *throat yellow;* belly white, sides pinkish-brown. *Ad.* ♀. — Similar to ♂, but decidedly smaller, the black much less pronounced; the pink tinge often wanting; throat duller.

The Shore Lark is a common winter visitant along the sea-coast from October to April; small flocks occasionally occur inland. Shore Larks feed in flocks along the flats left bare by the tide, and on the fields and hillsides, within sound of the surf.

Fig. 61. Horned Lark

Their notes are shrill, resembling the syllables *tsēē*, *tsēē-de-ree;* it is hard to distinguish them from those of the Titlark, which may be found in the same localities in fall and

spring, but not in winter. They are restless birds, flying high when disturbed, and passing back and forth from one hill to another, so that their notes are often heard high in air. On the ground they run or walk; in the air their wings look long and pointed. The "horns" show as little tufts of elongated feathers projecting backward on each side of the head.

The females are smaller, the yellow of their throats is duller, but they may be distinguished at very close range from the inland Prairie Horned Lark by the white eyebrow of the latter. Shore Larks are often associated with Snow Buntings, but may be known by their heavy square-shouldered build, the *yellow throat*, and the *black markings* which include it.

FLYCATCHERS: FAMILY TYRANNIDÆ

Nine Flycatchers occur as summer residents in some parts of New York and New England. Four or five are commonly distributed throughout the whole region; these are the Phœbe, the Kingbird, the Least Flycatcher, and the Wood Pewee, all of which are fairly common, and the Crested Flycatcher, which is locally common, but in many places rare or absent. In the lower Hudson Valley, the Green-crested Flycatcher occurs as a summer resident; in northern New York and New England, the Alder and the Olive-sided Flycatchers occur as fairly common summer residents. The Yellow-bellied Flycatcher is a summer resident of high mountains, and of the damp forests of northern New York and New England. All the Flycatchers sit more or less on exposed perches, in an upright position, with the tail held nearly straight down. From this station they fly out after passing insects, and then return to the same perch or another. Many of them during the breeding season are of a rather overbearing disposition, constantly wrangling with other birds that come near their nesting haunts.

LEAST FLYCATCHER; CHEBEC. *Empidonax minimus*

5.41

Ad. — Upper parts olive-green, tinged with brownish; *wing-bars ash-white;* under parts whitish, with a *slight* tinge of yellow on the belly.

Nest, a neat gray cup, often in a crotch from twenty to thirty feet up. *Eggs*, white.

The Chebec is very common throughout New York and New England, except in the less cultivated districts of northern New England and New York, where it is chiefly confined to the villages and the neighborhood of tilled fields, its place being taken in the wilder regions by the Alder Flycatcher. It arrives late in April, and in eastern Massachusetts is rarely seen after the end of August. It breeds in apple orchards, edges of woodland, in fact, wherever trees are separated by slight open spaces in which it can hunt. It sits on some fairly exposed perch, in the manner characteristic of flycatchers, and makes constant sallies into the air, down over the grass, or even against the trunks of trees.

The male in spring and early summer is a constant singer, snapping out the syllables *se-bic'*, with a violent jerk of his head and a quiver of the tail. Both sexes, after alighting, often utter a little gurgling note, and quiver wings and tail. The call-note is *whit*. Just before dusk the male often flies up from some tree near the nest, and delivers a flight-song, in which the call-note, *whit*, and the ordinary song, *se-bic'*, are repeated many times. (See also following species.)

ALDER FLYCATCHER. *Empidonax traillii alnorum*

6.09

Ad. — Upper parts dark olive-green, often with a tinge of brown; under parts white, washed with yellowish on the *belly; wing-bars brownish-gray.*

Nest, in crotch of small bush near the ground, made of coarser material than the Chebec's. *Eggs, spotted.*

LEAST FLYCATCHER

The Alder Flycatcher has been found breeding in northern New Jersey, in northwestern Connecticut, and in eastern Massachusetts, but outside the Canadian Zone it occurs chiefly as a regular but rare migrant late in May or very early in June. From the edge of the Canadian area northward it is a rather common summer resident, frequenting alder thickets along streams and swampy places, as well as wet clearings and ill-drained hillsides.

Its song is like the syllables *qui-dee'*, ending with a marked *ee* instead of the sharp *ic* of the Chebec. The singer either mounts an exposed perch, where he may be seen jerking his head violently, or as often sings concealed in the leafy twigs. Where the birds are common, the song is heard as late as the first week in August, but it is not regular after the middle of July. The call-note is a sharp *pip*.

Its appearance in the field is so like the Least Flycatcher that only a very well-trained eye can distinguish the two species. The notes, however, of the two are very unlike; the marked difference in habitat, moreover, should make it comparatively easy to separate the two species in the breeding season.

Green-crested Flycatcher. *Empidonax virescens*

5.75

Ad. — Upper parts dark gray; back tinged in strong light with greenish; *wing-bars buff or buffy-white;* under parts white, tinged with sulphur-yellow, shaded on the breast with grayish or greenish.

Nest, on a limb, from four to twenty feet up, shallow, pensile, of rootlets, grass, and plant stems, loosely put together. *Eggs*, creamy-white, spotted with brown.

The Green-crested Flycatcher is a locally common summer resident in the lower Hudson Valley as far north as Sing Sing, and in New Jersey as far north as Plainfield,

but *occurs in New England only as an accidental visitor.* It arrives in May, and generally leaves in August. It frequents woodland and orchards, especially in the neighborhood of small streams. The sharp call-note, *queep*, and the song, which Bendire writes *wick-up'* and Chapman *pee-e-yuk'*, are characteristic; these notes, the larger size, and the buffy wing-bars distinguish the Green-crested from the Least Flycatcher.

Yellow-bellied Flycatcher. *Empidonax flaviventris*

5.63

Ad. — Dark olive-green above; wing-bars whitish; *entire under parts yellowish*, brightest on the belly, shaded with olive on throat, breast, and sides.

Nest, sunk in mossy bank, or "among the earth-laden roots of a fallen tree" (Brewster). *Eggs*, white, marked with reddish-brown, chiefly at the larger end.

The Yellow-bellied Flycatcher is a rare migrant in eastern New England, and, like the Alder Flycatcher, appears very late in May or early in June, and again in August and early September. In western New England and in the Hudson Valley it is not rare, but it is often silent and of a retiring disposition, frequenting low woods and swampy places. On the higher Catskills and the mountains of northern New England and in the great spruce forests of Maine, where the ground is deep with a feathery moss (Hypnum), the Yellow-bellied Flycatcher is a fairly common resident. Here, too, it is shy and retiring, but its notes differ from those of the other small Flycatchers, and assist in its identification. Its call-note is like the syllables *ti-pee'-a*, and resembles closely a note of the Wood Pewee; its absurd little song, like the syllables *pe-wick*, is uttered almost as a monosyllable.

Its great similarity in appearance to the other little flycatchers, the Least and the Alder, should make a student

very careful in identifying it; the distinctly *yellowish* tinge over the *entire* under parts distinguishes it.

Wood Pewee. *Contopus virens*

6.53

Ad. — Upper parts dark brownish-gray; two *white wing-bars;* under parts whitish, the sides washed with dark gray.

Nest, flattish, saddled on a limb, twenty to forty feet up, exquisitely decorated with a green lichen. *Eggs,* white, with a ring of dark markings about the larger end.

The Wood Pewee is a rather common summer resident of New York and New England. It arrives in May, and leaves toward the end of September. It is a characteristic bird of open woodland groves or the tall shade-trees of village streets and plantations. It sits on the ends of dead limbs, usually in the shade of the upper branches, and darts out at passing insects, returning, after its sally, to the same perch or to a neighboring limb. The ordinary drawled *pee-a-wee pee-a* is to be distinguished, on the one hand, from the pure *phē̄-bee* of the Chickadee and the rather hoarse *phee'-wĭ* of the Phœbe. Toward the middle of August the full song is rarely heard, and the common note is a shorter *pee'-a*, which must not be confused in northern New England with the call-note of the Yellow-bellied Flycatcher. The bird utters beside a low *chit*, and about the nest an excited *chitter*.

The long-drawn song, when given, distinguishes the Wood Pewee from any of the other Flycatchers, but when the bird is silent it may be confused either with the Phœbe or with the Chebec. It may be distinguished from the former by its smaller size and by its *well-marked wing-bars;* moreover, it never flirts its tail after the manner of the Phœbe. It is considerably larger than the Chebec, and, when it faces an observer, the middle of its breast shows a light line separating the darker sides.

Olive-sided Flycatcher. *Nuttallornis borealis*

7.39

Ad. — Upper parts dark olive-gray and brown; under parts dark brownish on the sides, with a whitish stripe down the middle; *no wing-bars*, except in young birds; two white cottony tufts on the flank, which show in flight.

Nest, placed on a limb of an evergreen, twenty or thirty feet up. *Eggs*, white, with dark spots.

The Olive-sided Flycatcher breeds here and there in the hill country of Berkshire and Worcester counties in Massachusetts, not uncommonly in portions of Cape Cod, and regularly in the Canadian Zone. It is a rare migrant through eastern New England, in late May and early June; in western New England and the Hudson Valley it is less rare.

On the higher Catskills and the Adirondacks, and in northern New England, wherever the woodsman or a forest fire has left tall dead trees, the wild call of this bird may be heard. The birds fly from the tops of the tall stubs, sometimes almost straight up, or circle about, and light again on another perch. The song is loud, and resembles the syllables *pi-pee'*, or *pip, pi-pee'*. The call heard constantly, even in August, when the song is infrequent, is a loud *pip, pip-pip*.

Phœbe; Bridge Pewee. *Sayornis phœbe*

6.99

Ad. — Upper parts grayish-brown; head dark brown; *no conspicuous wing-bars;* throat and breast grayish; belly pale yellowish; sides dark. *Im.* — Wing-bars more distinct, and the under parts yellower.

Nest, composed largely of moss, placed on a beam or rafter in a shed or under a bridge, and in less settled regions on a ledge of rock. *Eggs*, white.

The Phœbe is a common summer resident throughout New York and New England. It arrives late in March or early in April, and lingers into October. It is common about

farm-buildings, sitting often on the ridgepole, but it also shows a marked fondness for the neighborhood of water.

The name Phœbe suggests the song, *phee'-wĭ* or *phee'-wi-wi*, hoarser than the pure whistle of the Chickadee, and with much more snap than the drawling note of the Wood Pewee. The Phœbe has also a *chip*, and about its nest a curious chattering cry. It raises two broods in the northern states, and the song is therefore heard well into July; after the moult in late summer the song is often heard again. In early spring the Phœbe occasionally utters a flight-song, beginning with *whits* and running into *phœbes* rapidly repeated.

The *sideways sweep of the tail* is a characteristic action by which the bird may always be identified; in the old birds the absence of wing-bars also serves to distinguish it from the Wood Pewee. Young birds have dull wing-bars, but they cannot refrain long from making a suggestive movement of the loose-hung tail.

Crested Flycatcher. *Myiarchus crinitus*

9.01

Ad. — Head dark brown above; back olive-brown; *tail* in flight nearly as *reddish* as a Brown Thrasher's; wing-bars brownish-white; throat and breast ashy; *belly sulphur-yellow.*

Nest, in holes in trees. *Eggs*, white, with dark streaks.

The Crested Flycatcher is a summer resident throughout New York and New England, but is absent from the forest region of northern New England and New York, except along the great water-courses. It is much commoner in Connecticut than in Massachusetts, where it is absent from many localities. It arrives early in May, and remains till September, but, like most of the flycatchers, is rather silent in August. It frequents orchards and woodland, breeding in holes in trees, generally using a piece of cast snake-skin in the material of the nest.

It has a very strong, harsh voice, and soon makes its presence known by its characteristic calls; one of these is a hoarse, long-drawn *wheep;* another is a lower *whip whip whip,* and a third a guttural, rattling cry. It frequents the tops of tall trees, and seems to get much of its food without the sallies into the air characteristic of the rest of the family. The crest is not nearly so prominent as in the Jay or Cedar-bird; the loose feathers on the head are partially erected. The loud, harsh notes first call attention to the bird, and the peculiar coloring of the under parts — ashy, yellow, and reddish-brown — should distinguish it when seen from below.

Kingbird. *Tyrannus tyrannus*

8.51

Ad. — Top of head blackish, with a concealed crest of orange-red; back gray; wings brown; *tail black, tipped with white;* under parts white, washed with grayish across the breast. *Im.* — Tip of tail and breast tinged with pale brownish-buff.

Nest, rather bulky, either in trees from ten to thirty feet up, or in bushes near water. *Eggs,* white, spotted with reddish-brown.

The Kingbird is a common summer resident throughout New York and New England, except in heavily forested regions. It arrives early in May, and is rarely seen after the first of September. It occurs wherever there are trees surrounded by open country, either in orchards or open farming land, or along streams. From the top of a tree, from a mullein stalk, or a telegraph wire, it watches the air round about, and makes sallies after passing insects. As it returns to its perch, it spreads its broad fan-shaped tail, showing the white tips of the black feathers.

The Kingbird is notorious for its habit of pursuing crows and hawks, darting at them from above with vicious jabs, often following them for a long distance, and returning at last with a shrill *kip-per, kip-per.* Its mating performance

consists in flying upward, and then tumbling suddenly in the air, repeating the manœuvre again and again, all the time uttering its shrill cry. During the nesting season, the male may often be seen on a conspicuous perch near the nest, and when the young are being fed, one parent flies out to meet the one that is bringing food, and welcomes it noisily.

The flight of the Kingbird is steady and at about the same level. The orange-red crest-feathers are generally concealed by their blackish tips, but in the mating season, or under the influence of anger, they flare out. The *black* tail, broadly *tipped with white*, and the *white under parts* make the Kingbird an easy bird to identify, even from a car window.

GOATSUCKERS, SWIFTS, HUMMINGBIRDS, ETC.: ORDER MACROCHIRES

HUMMINGBIRDS: FAMILY TROCHILIDÆ

RUBY-THROATED HUMMINGBIRD. *Trochilus colubris*

3.74

Ad. ♂. — Chin black, rest of *throat*, when seen from in front, intense *crimson* changing to golden red, but from the side apparently without color; rest of lower parts dusky-whitish; upper parts *bright green*. *Ad.* ♀. — Throat whitish; otherwise as in male.

Nest, of plant-down, saddled on a limb, the outside covered with lichen. *Eggs*, two, white.

The Ruby-throated Hummingbird is a rather common summer resident of New York and New England, arriving in May, and leaving in September. The neighborhood of flowers, particularly red flowers, attracts this insect-like bird; columbine, nasturtium, trumpet-vine, scarlet honeysuckle, monarda, and jewel-weed are particular favorites. Contrary to the general notion, the Hummingbird often perches either on a dead twig or on a telegraph wire; as it

sits, the long needle-like bill appears out of all proportion to the size of the tiny creature. Hummingbirds are very fearless, and often will not hesitate to fly about a bunch of some favorite flower held in the hand; they are also very irritable, constantly pursuing each other with excited squeaking. The male often poises in mid-air, and then with a sudden downward rush executes an arc, rising to the same height, then swinging back to the former station. The female alone is said to attend to all the duties of nest-building and the care of the young, which she feeds by thrusting her bill far down into their throats.

There is only one species of Hummingbird in eastern North America, but the male alone has the ruby throat. Certain sphinx moths, poising before the flowers in the afternoon, are often mistaken for hummingbirds.

SWIFTS: FAMILY MICROPODIDÆ

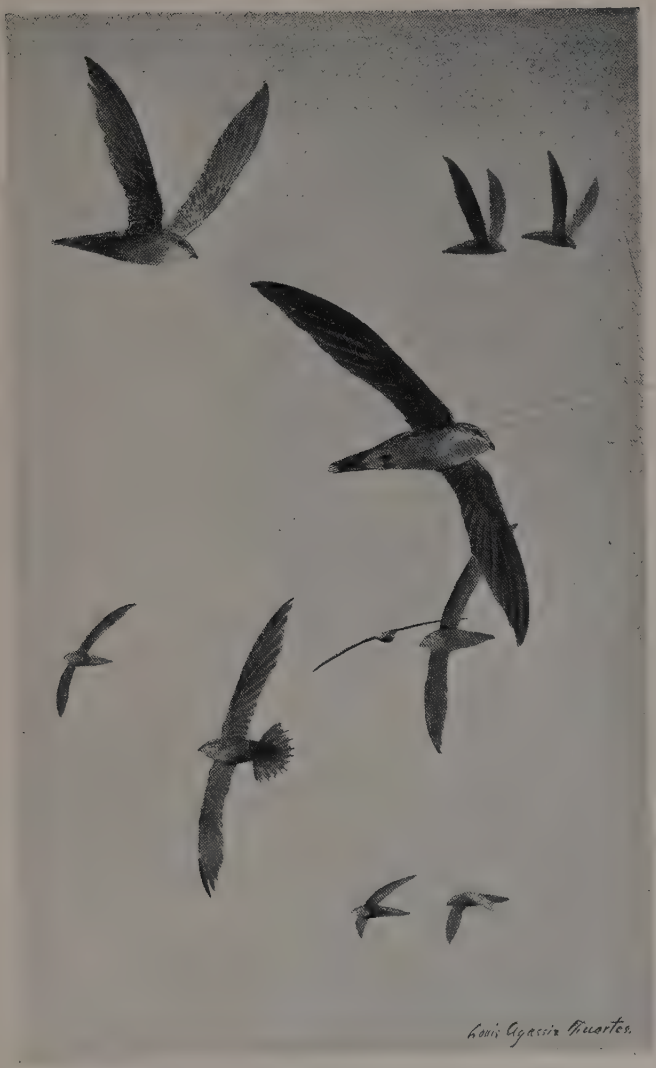
Chimney Swift. *Chætura pelagica*

5.43

Ad. — Entire bird sooty-brown, palest on throat; wings long and narrow; tail either *cigar-shaped*, or, when spread, fan-shaped. *Nest*, a shallow platform of sticks glued to the inside of a chimney. *Eggs*, white.

The Chimney Swift is an abundant summer resident throughout New England and New York. It arrives toward the end of April or early in May, and leaves toward the end of August; small flocks, presumably migrants from farther north, are often seen, particularly along the valleys of large rivers, till late in September.

The nest is made of short twigs broken off by the bird while flying. It is a moot point whether the bill or the feet are used for this purpose. These twigs are glued together and to the bricks in the chimney by saliva, and form a shallow platform on which the eggs are laid. In northern New



CHIMNEY SWIFT

England and New York the Swift still builds occasionally in hollow trees, as all its ancestors once did, or "on the inner walls of barns and outbuildings" (Brewster). Rain sometimes loosens the nest, which then falls to the bottom. The young, when fed, keep up an energetic crying, easily heard through the walls of the chimney.

The Swift's common note is either a loud staccato *chip, chip, chip,* or the same notes run rapidly together. This chippering, heard from little groups high overhead, is often the first intimation of the bird's presence in spring, and it is continued constantly till mid-July, then less frequently or only rarely till the bird's departure.

Chimney Swifts resemble swallows in their appearance on the wing and in their manner of feeding, but may be distinguished after a little practice by the appearance of the *tail,* which is *short* and *cigar-shaped,* or fan-shaped when spread, but never notched, forked, or square. Their flight, too, is characteristic; they alternate rapid bat-like strokes of the wings with periods when they glide with their wings curved in a long narrow crescent. Just before descending into a chimney and often when two are flying together they raise their wings at an angle over the body and keep them so for an instant. As a rule they hawk high, sometimes very high, but occasionally they fly low over grass, and they commonly fly low over water. Swallows frequently light on wires and twigs, but Swifts, as far as I know, have never been seen to perch. At night, and in the heat of the day, they cling to the rough bricks inside the chimney, supporting themselves with the help of the needle-like tips of their tail-feathers. Marvelous tales are told by the older writers of enormous numbers of Swifts which resorted nightly to certain well-known hollow trees to roost. It is still possible to see several hundred gathering about some tall deserted chimney down which they vanish at the approach of dusk.

NIGHTHAWKS, WHIP-POOR-WILLS, ETC.: FAMILY CAPRIMULGIDÆ

There is a belief common among country people that the Nighthawk and Whip-poor-will are one and the same bird; it is probably due to the fact that the latter is so rarely seen, and so constantly heard.

Nighthawk. *Chordeiles virginianus*

10.00

Ad. ♂. — Entire upper parts, when seen near to, black, finely speckled with gray, and a little brown; middle pair of tail-feathers like back, the others tipped with black and crossed near the tip by a white band; a *broad band of white across the throat;* breast black, speckled with gray; belly gray, barred with black, often tinged with buff; wings long and narrow; a *broad white bar crosses the wing,* showing best from below. *Ad.* ♀. — Similar, but throat-band buff instead of white; no white on tail.

Eggs, laid on bare rocks or gravel roofs, dull white speckled with gray or brown.

The Nighthawk is a summer resident throughout New England and New York, common in some localities, rare or absent in others. It arrives in May and leaves for the south toward the end of August, when large flocks of Nighthawks are often seen passing overhead, particularly along broad river valleys; it is occasionally seen in September.

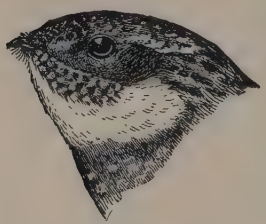


Fig. 62. Nighthawk

Curiously enough, though the suburbs of many of our large cities are no longer wild enough to offer the Nighthawk proper breeding-sites, it has found the flat gravel-covered roofs of the cities themselves suitable for nesting-sites, while the air about supplies it with an abundance of food. The Nighthawk is a not un-

common sight over the streets of Boston and New York, and its harsh *peent* is a common sound. Outside the cities it breeds on rocky hillsides, or in wild pastures, laying its

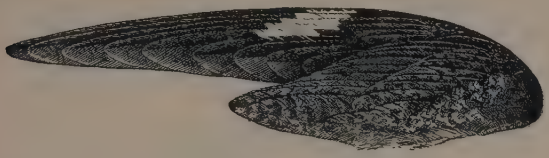


Fig. 63. Wing of Nighthawk

two eggs on flat rocks or bare spots where their speckles of gray or brown harmonize with the surrounding stones and lichens. In the breeding season the male dives down from a considerable height, and as he nears the ground turns off and up in an abrupt curve; at the same time he manages to produce, probably with his wings, a loud and peculiar booming sound. The neighborhood of water attracts Nighthawks, as it does the swallows, and doubtless for the same reason. They may be seen hawking high over the river valleys, their long wings carrying them forward with apparent deliberation, though constant, quick upward strokes, or rapid turns to either side, betray the ceaseless search for insect food. Their size, when thus feeding, distinguishes them from any swallow and from the Swift; they are often taken for small hawks, but they may be always recognized by the *bar of white across the wing*, which shows best from below. Occasionally one may be seen perched *lengthwise* along a limb or a fence-rail. (See following species.)

Whip-poor-will. *Antrostomus vociferus*

9.75

Ad. ♂. — Upper parts a mixture of black, gray, and yellowish-brown, *no white;* wings barred with black and yellowish-brown; throat black; upper *breast* black, *crossed* by a *narrow white*

band; rest of under parts buff, speckled with black; middle tail-feathers like back, the three outer pairs with the terminal half *white. Ad.* ♀. — Similar, but band across breast buff, and outer tail-feathers narrowly tipped with buffy white.

Eggs, creamy-white, spotted with lilac or lavender, laid in dry leaves on the ground in woods.

The Whip-poor-will is a locally common summer resident throughout New York and New England, arriving late in April or early in May, and staying into September. It is a bird of the woodland, especially along streams or at the edges of farming-land, and has become scarce in many localities, as the woodland has given way to cultivated ground. It spends the day in dense thickets or in deep woods, on the ground or on low limbs, and if surprised in such a place it flutters off as if bewildered, but with noiseless flight.

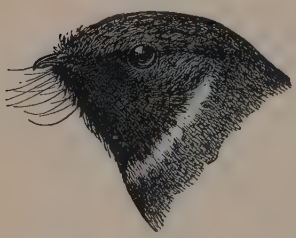


FIG. 64. Whip-poor-will

The song of the Whip-poor-will begins at dusk, is heard at intervals all night long, and regularly before dawn; it is often repeated a hundred times in rapid succession. If the song is heard at close range, it is found to begin with an introductory *chuck.* During midsummer the song is less frequently heard, but on the breeding-ground it is repeated a few times nearly every night, even in September.

By those who live surrounded by woods, the Whip-poor-will is not infrequently seen sitting at dusk on the ridge-pole of some shed, or flying about engulfing moths and beetles in its cavernous mouth. Its relative the Nighthawk is much more often seen by day, roosting on some limb, fence-rail, or rock. Both lie lengthwise on the limb, but the Whip-poor-will has a white or buffy band on the *upper breast,* while the Nighthawk has one on the *throat.*

The Whip-poor-will has conspicuous bristles about the bill, has *no white bar on the wing*, and has the entire plumage much speckled with yellowish-brown. The Whip-poor-will has a rounded tail, and the outer feathers *end* for a greater or less length in white or buff; the Nighthawk has a forked tail tipped with black and *crossed* in the male near the tip by a white band.

WOODPECKERS, ETC.: ORDER PICI

WOODPECKERS: FAMILY PICIDÆ

Eight species of Woodpecker occur in New York and New England. Only two, however, the Downy and the Flicker, are common residents throughout this area. The Hairy Woodpecker is very similar to the Downy, and is generally confined to regions which have a certain amount of good-sized timber, while the Pileated Woodpecker lives only in deep forests. The Sapsucker breeds in northern New York and New England, and occurs as a migrant elsewhere. The Red-headed Woodpecker occurs only in southern and western New England and in eastern New York. The two Three-toed Woodpeckers are confined to the forests of northern New York and New England. The habitual resorts of all Woodpeckers are the trunks and large limbs of trees, though, except in the breeding season, the Flicker is nearly as often seen on the ground, where it feeds on ants, as on trees, to which it resorts chiefly as a perch. Woodpeckers all fly in great undulations, holding their wings close to the body for an instant, then rising by means of two or three more strokes. Most of the Woodpeckers feed on the larvæ of borers which they extract from the trunks or limbs of trees; they are, therefore, permanent residents. The Sapsucker, however, and Flicker are not adapted to feed on borers, and are therefore migrants.

Northern Flicker; Golden-winged Woodpecker.

Colaptes auratus luteus

12.00

Ad. ♂. — Head grayish-brown, a scarlet band across nape of neck; back brown, barred with black; wings and tail black; *shafts and under sides of wings* and tail-feathers *golden-yellow; rump white;* throat pinkish-brown; line along side of throat and band across upper breast black; rest of under parts buffy, marked with round black spots. *Ad.* ♀. — Similar, but without the black line along the side of the throat.

Nest, in a hole in a dead limb. *Eggs,* white.

Near the sea-coast, from Massachusetts southward, and in the lower Hudson Valley, the Flicker is not uncommon in

Fig. 65. Northern Flicker

winter. In the rest of New England it is only a summer resident, common everywhere except in the northern heavily-forested regions. The migrants return in March or April, and are then extremely noisy; their loud *wick wick wick wick* is one of the characteristic sounds of a bright spring morning. This is generally the cry of the male only, who also delivers at this season a tattoo on a resonant limb, which may often be heard in the pauses of the loud call.

The ordinary call-note of the Flicker is a high-pitched *ti-err*, often confused by beginners with the *teer* of the Blue Jay. The Flicker's note is sharper, less prolonged, and has a marked downward inflection; it is, moreover, usually given but once, or repeated only after a little interval, whereas the Jay generally screams two or three times in quick succession.

When two or more birds come together, the males spread wings and tail, bowing and turning, while both sexes utter a note, like the syllables *yuck'-a yuck'-a yuck'-a*. At such a time the full beauty of the plumage is displayed, the large black dots on the breast, the red band on the ashy nape, the black collar on the breast, and the black mustaches of the male. Ordinarily, however, the bird looks merely brown. When uttering the long, loud call, the male often perches across a large twig or small limb, but as a rule he alights on the upright trunk of a tree after the fashion of other Woodpeckers. In spring and summer Flickers spend much time on the ground, feeding on ants; and in autumn they eat greedily of black cherries.

The eggs are laid in a hole excavated by the birds, generally in a dead limb, with a large circular opening. The same nest is often used over and over. If one raps on the trunk of a tree so occupied in May, the startled female often appears for an instant in the opening and then hurries off. At such a time, when the bird flies directly overhead, the *golden under sides of the wing* and tail-feathers show; ordinarily, the Flicker is readily identified by its size and peculiar flight (see Woodpeckers, p. 215) and by the *white rump*, which shows as it flies from one group of trees to the next.

RED-HEADED WOODPECKER. *Melanerpes erythrocephalus*

9.75

Ad. — *Whole head and upper breast crimson;* upper back, wings, and tail bluish-black; lower back, *wide band across wing*, and

belly *white;* outer tail-feathers tipped with white. *Im.* — Head and breast gray, streaked with black; black of back veiled with gray; white in wing barred with black; belly white, streaked with grayish-brown.

Nest, in a hole, in a tree. *Eggs,* white.

The Red-headed Woodpecker is a permanent resident of New York, and along the valley of Lake Champlain in

Fig. 66. Red-headed Woodpecker
(From Biological Survey, U. S. Department of Agriculture)

Vermont. In the latter region it is not uncommon, but in the lower Hudson Valley and about New York city it is generally rare, though occasionally common as a migrant. In eastern New England it is only an accidental visitor. The Red-headed Woodpecker is fond of open groves, and is often seen flying from fence-posts in pastures which contain trees. Its common note is almost identical with the *grrrr* of the tree-toad.

The term Red-headed Woodpecker is commonly misapplied to various Woodpeckers; the Flicker, the male Downy, and the Hairy, all have a red patch on the back of the head, while the Sapsucker either has the crown red, or both the crown and throat red. In the adult Red-headed Woodpecker, however, not only the whole head and throat are red, but the upper breast as well. When it flies, it shows a striking contrast of white with glossy black.

Northern Pileated Woodpecker. *Ceophlœus pileatus abieticola*

17.00

Ad. ♂. — Entire plumage apparently black; throat, two stripes on side of head, one on side of neck, and a bar on the wing, white; *whole top of head bright scarlet,* the feathers forming a *crest;* stripe along the cheek red. *Ad.* ♀. — Similar, but only the crest scarlet.

Nest, in a hole in a tree. *Eggs,* white.

The Pileated Woodpecker, Logcock, or Woodcock, as the lumbermen call it, is a permanent resident of those portions of northern New York and New England that are still heavily forested; elsewhere in New York and New England it is a rare straggler. It is a mighty hewer of wood, leaving signs of its activity in nearly every decaying tree and on many sound ones in its neighborhood. Where it digs for grubs, it cuts out great square mortise-like holes, different from the round nesting-holes of woodpeckers in general. These holes often run deep into the tree, or run into each other up and down the trunk. The noise of its hammering resounds through the woods like the blows of a woodman's axe. Its call, or cackling, frequent in spring, suggests that of the Flicker, but is wilder and louder.

Its flight is undulating, and this, with the white patch and scarlet crest, will easily identify it when flying; when against the trunk of a tree it is, of course, unmistakable.

Yellow-bellied Sapsucker. *Sphyrapicus varius*

8.56

Ad. ♂. — Crown and throat crimson, edged with black; line from bill under eye white; back and wings black, everywhere speckled with white; *broad stripe from shoulder along edge of wing white;* middle tail-feathers barred with white; upper breast black; belly yellowish. *Ad.* ♀. — Similar, but throat white. *Im.* — Crown blackish; throat whitish; breast gray, with blackish bars.

Nest, in a hole in a tree. *Eggs,* white.

In the Canadian Zone the Sapsucker is a common summer resident; elsewhere in New England and New York it

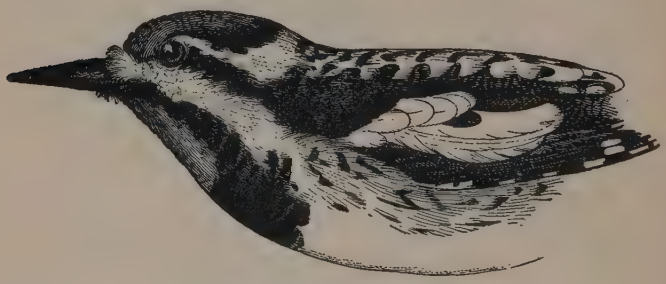


Fig. 67. Yellow-bellied Sapsucker

is a migrant, passing north in April, and returning in late September and early October. It is occasionally found in winter in the lower Hudson Valley. On migration it is found in apple orchards, open groves, and not infrequently on shade trees about the houses. The Sapsucker breeds in Massachusetts only on Mount Greylock, and there but sparingly; but on the upland of Vermont, in northern and central New Hampshire, in the Adirondacks, and in the Maine woods, it breeds commonly.

Each pair have a "sugar orchard" of maple or birch, to which they resort constantly to drink the sap; in order to

obtain it they drill small holes in successive rows, which often completely encircle the tree. Here they may be found clinging to the trunk, which is already riddled with holes and perhaps dying. About them fly hummingbirds, bees, and butterflies, attracted by the sweet liquid. For a long time there was doubt as to their object in drilling the holes, many believing it was to attract insects. Mr. Bolles ("Auk," vol. viii. p. 256) has shown that while insects do form a considerable part of their food, their chief object in drilling the holes is to get the sap. They also eat pieces of one of the inner layers of the bark. Nearly every old apple-tree gives evidence in its numerous rings of the visits of the Sapsucker. The young while in the nest are fed on insects, which the Sapsuckers often take on the wing.

On the breeding ground the Sapsucker is noisy, uttering a squealing cry like a Jay's or Red-shouldered Hawk's, but more subdued; it also drums on resonant bark loud enough to be heard at a considerable distance. While migrating however it rarely utters a sound, and it is only when the eye catches sight of its rather stout body, pitching from one tree to the trunk of the next, that attention is called to it. If it is an adult, the crimson crown extending over the forehead serves to identify it. The speckled back and the *stripe of white which shows along the black wing*, even when the wing is closed, serve to distinguish the young bird.

American Three-toed Woodpecker. *Picoides americanus*

8.75

Ad. ♂. — Similar to the following species, except the top of the head, which is more or less mixed with white, and the back, which is *crossed by narrow white bars*. *Ad.* ♀. — Similar to ♂, but without the yellow crown-patch.

Nest, in a hole in a tree. *Eggs*, white.

The American Three-toed Woodpecker "has practically the same range in New England as [the following species, but] it is in most places very much less numerous. Among the White Mountains, however, and about the sources of the Connecticut River, it is not so very uncommon for a bird of its solitary and retiring disposition" (Brewster).

This species occurs south of its breeding-range far less often than the following, from which it may be distinguished by the narrow *bars of white across* its back.

Arctic Three-toed Woodpecker. *Picoides arcticus*

9.50

Ad. ♂. — Top of head black, with yellow crown-patch; *back black;* stripe on side of head white, bordered beneath by a black line; wings black, spotted with white; middle tail-feathers black, the outer feathers white. *Ad.* ♀. — Similar, but without the yellow crown-patch.

Nest, in a hole in a tree. *Eggs,* white.

The Arctic Three-toed Woodpecker is "a rather common but somewhat local resident of the wilder and more heavily timbered portions of northern New England, whence it sometimes wanders southwards in autumn and winter" (Brewster). It is rare south of the White Mountains, the Adirondacks, and the forests of Maine, though stragglers are occasionally found in autumn and winter as far south as Connecticut. Its notes are loud and shrill, and are often uttered as the bird flies.

The *plain black back* serves to distinguish it from any other small woodpecker. The white *stripe* on the side of the head is also a help to identification, the corresponding mark on the American Three-toed Woodpecker being a mere *line.* Mrs. Eckstorm, in "The Woodpeckers," says that she has found this to be the best field-mark of this species. Adult *males* of both this species and the preceding have conspicuous *yellow* patches on the *crown.*

Downy Woodpecker. *Dryobates pubescens medianus*

6.83. Bill .68

Ad. ♂. — Upper parts black; stripe above and below eye, *middle of back*, and bars across the wing *white;* outer tail-feathers white, barred with black; under parts white; a scarlet patch at the back of the head. *Ad.* ♀. — Similar, without the scarlet patch. *Im.* — Young males in summer have a reddish-brown patch at the back of the head.

Nest, in a hole in a dead limb, from ten to thirty feet up. *Eggs*, white.

The Downy Woodpecker is a common permanent resident of New England and New York. It frequents woodland, orchards, and shade trees. In winter it often follows a wandering band of Chickadees, and may easily be attracted to a bone or piece of suet hung on a limb near the house. Occasionally in spring one sees a Downy flying through the trees as if crazy, or two sometimes have a wild chase in and out of the tree trunks.

In March the male begins to drum on some dry resonant limb, and by May the pair have excavated a nesting-hole in a dead limb in some woodland tree. The call-note of the Downy is a sharp *chick*, and it also gives, less frequently, a shrill cry with a rapid downward fall, suggesting in form the whinny of a horse. The young, when following the parents, have a shrill whinnying cry like the adults, but with less downward inflection.

The attitude of the Downy, when climbing the trunk or large limb of a tree, distinguishes it readily from the smaller Black and White Warbler. It is always erect, parallel, that is, with the limb, sometimes above a horizontal limb, sometimes on the under side, but never peering over each side as the Warbler does. Its progress is by jerks; it often backs down, tail first, but never comes down head first, like the Nuthatch. Occasionally it perches like a song-bird across a small twig. (See, also, following species.)

Hairy Woodpecker. *Dryobates villosus*

9.40. Bill 1.22

Ad. — Similar to the Downy Woodpecker, but larger, the outer tail-feathers pure white, not barred with black.

Nest, in a hole in a tree. *Eggs*, white.

The Hairy Woodpecker is a permanent resident of New England and New York, but is much rarer than the Downy in more cultivated districts. Where there is considerable woodland, especially good-sized timber, it is fairly common. In the breeding season it is rarely seen out of the woods, but in fall and winter it wanders about, and not infrequently comes to suet or bones hung out in village yards.

The *chink* of the Hairy is like that of the Downy, but to a trained ear it sounds heavier and wilder. Its rattling call lacks the downward run so characteristic of the Downy and suggests the rattle of a Kingfisher.

If one is in doubt about a woodpecker, the bird is probably the Downy rather than the Hairy, for when the larger bird is seen its size attracts notice at once; it is nearly as large as a Robin, and its bill looks long and heavy. The outer tail-feathers are pure white, not barred with black as in the Downy; but this difference is of little help, unless the bird is seen near at hand, and with outspread tail.

CUCKOOS, KINGFISHERS, ETC.: ORDER COCCYGES

KINGFISHERS: FAMILY ALCEDINIDÆ

Belted Kingfisher. *Ceryle alcyon*

13.02

Ad. ♂. — Upper parts grayish-blue; feathers of the wing tipped with white; spot before the eye white; tail-feathers narrowly barred with white; broad collar white; band across the breast bluish-gray; lower breast and belly white; *bill long;*

feathers of the back of the head long, often raised as a crest. *Ad.* ♀. — Similar to ♂; band across the belly and sides chestnut. *Nest*, in a deep hole in a bank of sand. *Eggs*, white.

The Kingfisher is a summer resident of all parts of New England and New York, appearing in April, as soon as the

FIG. 68. Belted Kingfisher

ice melts from the streams and ponds, and staying till October. Along Long Island Sound and in the lower Hudson Valley, where there is open water all winter, a Kingfisher is occasionally seen even at that season. Any point of lookout over the water may become the Kingfisher's perch, — spar-buoys and spindles in little coves and harbors, limbs of trees extending over quiet mill-ponds or pools in mountain streams. Here it sits and watches the water below, or when startled passes along the shore or up the brook, with a loud cry, like a watchman's rattle. It often hovers over one spot, with body nearly perpendicular, and wings beating rapidly, watching some fish below, ready to plunge and seize it in its long bill.

The Kingfisher may often be seen flying high overhead from one fishing-ground to another, or to its burrow. It may then be identified by its curious flight; after two or three wing-strokes at ordinary intervals it quickens the time, taking two or three strokes much more rapidly.

CUCKOOS: FAMILY CUCULIDÆ

Neither of our two species of Cuckoo gives the cuckoo cry of the European species.

Black-billed Cuckoo. *Coccyzus erythrophthalmus*

11.83

Ad. — Upper parts uniform brown; under parts white; *bill black; skin about the eye red; small* tips of white on all but the inner pair of tail-feathers.

Nest, of sticks, loosely constructed, in a bush or a low tree, or in a dense mass of vines. *Eggs*, pale greenish-blue.

The Black-billed Cuckoo is a common summer resident of southern and central New England and of the Hudson Valley, arriving in the first half of May, and occasionally lingering till late in September; it is less common in northern New England and is absent from the higher and heavily forested regions. It inhabits tangled thickets, plantations, and the edges of woodland, feeding on caterpillars in the thick foliage. In May, when the web-like nests of the tent-caterpillar are conspicuous in apple and wild cherry-trees, both species of cuckoo resort to them, and pick out the hairy caterpillars, which most birds eschew.

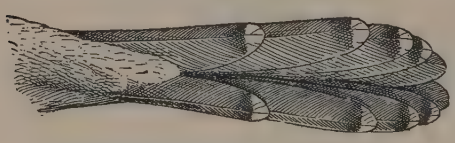


Fig. 69. Tail of Black-billed Cuckoo

Each species of cuckoo has two sets of notes, which are very similar in tone and form. One consists of a series of

notes like the syllables *kuk-kuk-kuk-kuk-kyow-kyow-kyow*. These the Black-billed introduces by a gurgling note; its notes, moreover, are more liquid, less wooden than those of the Yellow-billed. Besides these prolonged calls each species has a shorter call: that of the Black-billed sounds like the syllables *kuk-kuk*, or *kuk-kuk-kuk*, the double, triple, or sometimes quadruple combinations being repeated often many times; the corresponding notes of the Yellow-billed are single, low, dove-like notes, *coo, coo, coo, coo*.

The Black-billed Cuckoo, when seen at short range, may be distinguished by the *black under mandible*, by the rim of bare red skin about the eye, or by the *small* white tips on the *dusky* (not black) tail-feathers. It has a habit when alarmed or excited of raising its long tail slowly.

Yellow-billed Cuckoo. *Coccyzus americanus*

12.20

Ad. — Upper parts brown; under parts white; *lower mandible yellow*, except the tip, which is black; tail long, rounded, the three outer *blackish tail-feathers* ending in *large white* spots; a broad area of *cinnamon* showing in the *wings* when the bird flies.

Nest, of sticks, loosely constructed, in a low tree or bush, or in a dense mass of vines. *Eggs*, pale greenish-blue.

The Yellow-billed Cuckoo is a summer resident of New York and New England, rarely occurring beyond the northern boundary of Massachusetts. It arrives in the first half of May, and occasionally lingers late into September. In the hilly portion of central New England it is rare, occurring in Berkshire County only along the rivers and at the outlets of lakes. In eastern Massachusetts and about New York this and the preceding species are often equally common.

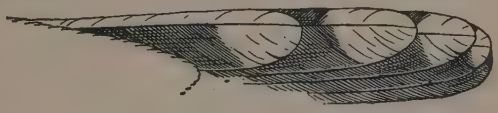


Fig. 70. Tail of Yellow-billed Cuckoo

The haunts and habits of the Yellow-billed Cuckoo are similar to those of the preceding species. It slips quietly into the trees and then sits motionless, so that it is more often heard than seen. Its notes have been described under the preceding species.

To distinguish the Yellow-billed Cuckoo from the Black-billed it is necessary to get near enough to see the *large white spots* on the tips of the *blackish* tail-feathers, or the *yellow under mandible*, or to catch, as the bird flies, the *cinnamon in the wing*.

BIRDS OF PREY: ORDER RAPTORES

OWLS: SUBORDER STRIGES

HORNED OWLS, ETC.: FAMILY BUBONIDÆ

While seven or eight species of Owl occur in New York and New England, only one, the Screech Owl, is at all common in inhabited regions. The Barred Owl and the Great Horned Owl are the species most frequently heard in deep forests. The other species are either uncommon and retiring permanent residents, or rare or regular wanderers from the north. The Snowy Owl and the Hawk Owl hunt by day, and the Short-eared Owl is often seen in the daytime, but the other Owls are nocturnal, hiding by day in some hollow tree or thick evergreen. Here they are occasionally discovered by a band of jays, crows, or smaller birds, who surround or pursue them with great outcries. Owls bolt their prey bones and all and then disgorge the indigestible portions in the form of pellets; their presence is, therefore, often indicated by the appearance on the ground of numbers of these gray pellets. They hoot at all seasons of the year, but less commonly in summer and very constantly in late winter and early spring. An Owl is easily recognized by its

noiseless flight and by the peculiar human appearance of the face, due to the position of the eyes, both of which look forward. The feathers which surround the eye are known as the facial disk; in one or two species their color serves as a good field-mark. It is important also to determine the presence or absence of "horns," or erect tufts of feathers, which in several species rise from the head.

American Hawk Owl. *Surnia ulula caparoch*

15.00

Ad. — Top of head and hind neck spotted with white; back dark brown; under parts white, streaked on the throat, barred on the breast and belly with brown; wings and tail brown, barred with white; *face whitish, encircled with black;* tail considerably more than a third as long as the whole bird; bill yellowish-white.

The American Hawk Owl is usually a very rare winter visitant in northern New England; occasionally, however, it is fairly common in winter in Maine and northern New Hampshire. It is as diurnal as a hawk, and watches for its prey on a perch in plain sight. It may be known by its tail, which is much longer in proportion than that of any of our other owls.

Snowy Owl. *Nyctea nyctea*

25.00

Ad. ♂. — *Entire plumage white,* more or less barred on head, back, wings, and tail, and often on the belly and sides, with brown. *Ad.* ♀. — Much darker than ♂, only the face, front of neck, and middle of breast pure white; rest of plumage heavily barred with brown.

The Snowy Owl is a very irregular winter visitor from the north, sometimes occurring in large numbers, but often absent for several years; it is found more often along the sea-shore than inland. It is strictly diurnal, and may be seen perched on some rock or tree, conspicuous enough if

there is no snow about. The sexes vary in the amount of brown color in the white feathers, but the general effect is always so white that there is no chance of confusing it with any other owl.

Great Horned Owl. *Bubo virginianus*

22.00

Ad. — Head and neck speckled with black and tawny; rest of the upper parts speckled with gray; *collar across breast white;* rest of the lower parts tawny, barred with black; disk tawny; ear-tufts nearly two inches long, black and tawny; eyes yellow.

Nest, in trees, often a deserted hawk's or crow's nest. *Eggs,* white.

The Great Horned Owl is a permanent resident of New York and New England; it is found only in extensive tracts of woodland, particularly where swamps give shelter to hares and grouse, on which it feeds. Its common call is a deep-voiced hoot, made up of a number of syllables. It differs from the cry of the Barred Owl in keeping on the same note to the end, and being less regular in form and accent. It may be written thus: *Whoo'*, *hoo-hōō*, *hōō*, *hōō*. If discovered in the daytime, it may be readily identified by its great size, prominent ear-tufts, and *broad white collar.*

Screech Owl. *Megascops asio*

9.40

Ad. — Either bright reddish-brown, or delicate brownish-gray, streaked with black, the two phases of color having nothing to do with sex or age; two "*ears*," tufts of feathers about an inch long, *on the sides of the head.*

Nest, in a hole in a tree. *Eggs,* white.

The Screech Owl is a common permanent resident of New York and New England, more common in the southern portion of its range, and absent from the mountainous and

heavily forested regions of the north. It is the only owl which remains in the towns and villages, the only one whose voice is regularly heard away from deep woods. Its notes are a frequent accompaniment of winter twilights, and though more often heard in autumn and winter, they are uttered occasionally at every season. The name, borrowed from Europe, is not appropriate to our species. The cry is tremulous, quavering, suggesting the soft whinnying of a horse, or the rapid and muffled beating of wings.

Fig. 71. Screech Owl

Sometimes the little owl is seen sitting on a branch of the tree in the gathering dusk, but as a rule it keeps concealed during the day in thick evergreens, or more often in the hollow of a tree. The presence under a tree of gray pellets of mouse-fur, inclosing skull and bones, is evidence that an owl either inhabits or has inhabited the tree. Sometimes an excited scolding and fluttering of Chickadees about a hole in an apple-tree betrays the little recluse. The *ear-tufts* distinguish it from the much rarer Acadian, our only other small owl; its small size should easily distinguish it from the other owls. (See also Long-eared Owl, p. 233.)

Saw-whet Owl; Acadian Owl. *Cryptoglaux acadica*

8.00

Ad. — Upper parts brown, more or less spotted with white, under parts white, striped with brown; wing, when spread, crossed with several rows of white spots; *no ear-tufts*. *Im.* — Upper parts plain brown; under parts brownish, fading on the belly into yellowish-brown.

Nest, in holes in trees, often in a deserted woodpecker's hole. *Eggs*, white.

The Acadian Owl is a rare permanent resident of northern New York and New England, and a rare migrant and winter visitant in southern New York and New England. Its notes, which have given this owl one of its names, suggest the rasping sound made in filing a saw. It is smaller than a Screech Owl, and is readily distinguished by the *absence of ear-tufts*. The spots of white on the brown back, moreover, give it a very different tone of color from that of the Screech Owl, with its fine streaking of black and reddish-brown, or gray.

Barred Owl. *Syrnium varium*

20.00

Upper parts dark brown, barred or spotted with buffy; lower parts whitish, *barred* with brown *across the breast;* belly striped with brown; disk gray; *bill yellowish; no ear-tufts.*

***Nest*, in trees, usually in hollows, sometimes in a deserted hawk's or crow's nest. *Eggs*, white.**

The Barred Owl is a permanent resident of New York and New England. Like most of the large owls, it is now rare and confined to the wilder, more heavily wooded districts, where its hooting is a characteristic sound of wild, swampy woods. Its ordinary cry is composed of a regular number of syllables, about eight in all, divided into two sets of four each, very similar in form; the second, however, ends in a deep hollow note with a downward cadence. It may be written *hoo hoo hŏŏ hŏŏ, hoo hoo hŏŏ hoo'- aw.* Its regular form and the falling cadence at the close distinguish it from the other common hooting sound in the wild forests, that of the Horned Owl. It is oftener heard in winter and early spring than in summer; it is regularly uttered in the evening, but not infrequently in the daytime also, especially in answer to an imitation of the cry, or because of some other unusual excitement.

Sometimes the Barred Owl is discovered in the daytime,

hiding in a thick evergreen, or in some hollow tree, the centre, perhaps, of a little mob of angry birds. It may be then recognized by its large size, *absence of ear-tufts*, and the brown *barring across the breast.*

Short-eared Owl. *Asio accipitrinus*

15.50

Ad. — Upper parts *yellowish-brown*, streaked with black; under parts buffy, streaked with dark brown, particularly on the breast; wings and tail, when spread, spotted and barred with white; disk blackish around the eyes; *ear-tufts very short. Im.* — Upper parts darker; under parts dull buffy, *unstreaked;* disk brownish-black.

Nest, on ground. *Eggs*, white.

The Short-eared Owl is a rare and local permanent resident of New York and New England, but is chiefly met with as a migrant, especially along ocean beaches and in extensive marshes. It is occasionally as diurnal as the Snowy Owl, and may be seen beating over the marshes or sand dunes. When startled it sometimes flies to a post or knoll in the marsh or on the beach, and lights there. Dusk, however, is its favorite hunting-time, and it generally spends the day on the ground in thick grass. Its ear-tufts are not at all prominent, even in the live bird, but it may be known from the forest-haunting Barred Owl by the nature of the country in which it is generally found, by its smaller size, the lighter tone of its upper parts, and by the absence of barring on the breast.

American Long-eared Owl. *Asio wilsonianus*

14.80

Ad. — Prevailing color of the upper parts dark brown, speckled with whitish and yellowish-brown; lower parts whitish, streaked and barred with dusky; ear-tufts conspicuous, over an inch long, blackish, rising *from the middle of the head; disk about eyes rich reddish-brown.*

Nest, in trees, generally a deserted crow's or hawk's nest. *Eggs*, white.

The Long-eared Owl is a rather uncommon permanent resident of New York and New England. Like all the larger owls, it is more common in the wilder parts of its range. It frequents swampy woods or thick evergreens, hunting at night and hiding in thick foliage by day. Its cry is "said by some to resemble the noise made by kittens, while others state that it is like the barking of small dogs" (Fisher). It may be known by its size, intermediate between the Screech Owl and the Great Horned Owl, and by its conspicuous ear-tufts, which rise from the middle and not the sides of the head. (See also Screech Owl, Fig. 71, p. 230.) If it faces an observer, the *rusty-brown facial disk is conspicuous.*

BARN OWLS: FAMILY STRIGIDÆ

American Barn Owl. *Strix pratincola*

18.00

Ad. — Upper parts buffy-yellow, mixed with white and gray, and speckled with black; under parts varying from white to bright tawny, dotted with black; disk varying from white to tawny.

Nest, in a tower, steeple, or hole in a tree. *Eggs*, white.

The Barn Owl is a rare but regular resident from Long Island and northern New Jersey southward. It very rarely issues forth in the daytime. Bendire describes its common cry as a "peevish scream," frequently heard at night; he mentions also "a feeble querulous note sounding somewhat like the call of the Nighthawk," and "an unpleasant hissing noise." If seen perching, it will be readily recognized by its white or tawny face, encircled by a reddish-brown ring, and by its conspicuous *long legs*, which are not hidden by its plumage, as in the other owls.

HAWKS, ETC.: SUBORDER FALCONES

HAWKS AND EAGLES: FAMILY FALCONIDÆ

Thirteen species of Hawks (including the Bald Eagle) occur regularly in New York and New England. Of these, nine belong to three genera, *Falco*, *Buteo*, and *Accipiter*, which differ so much in their proportions and in the characteristics of their flight, that it is important to become familiar with them. The Sparrow Hawk, the Red-shouldered Hawk, and the Cooper's Hawk are the commonest representatives of these three genera. All these species hunt in country where woods alternate with open land, and are seen most frequently flying overhead or perched upright on some lookout post.

The Marsh Hawk, which belongs to a different genus, is often commoner than the Sparrow Hawk, while the little Sharp-shinned Hawk is common everywhere in spring and fall. The frontispiece and the plate facing page 246 illustrate the differences between the four common genera. The Marsh Hawk hunts low over extensive meadows; the Fish Hawk plunges into the water from a great height; the Eagle, too, is generally seen near large bodies of water; the Rough-legged Hawk is a rare migrant or winter visitant to extensive meadows; the Goshawk and the Pigeon Hawk are rare, and the Broad-winged Hawk is only locally common.

AMERICAN OSPREY; FISH HAWK. *Pandion haliaëtus carolinensis*

23.10

Ad. ♂. — Upper parts grayish-brown; *head, neck, and under parts white;* sides and top of head marked with dusky. *Ad.* ♀. — Similar to ♂, but with breast spotted with brown.

Nest, in trees or on poles near the water. *Eggs,* varying from buffy-white to reddish-brown, spotted with dark brown.

The Fish Hawk is a local summer resident of New York and New England, breeding near the coast or on large inland rivers and lakes. There are colonies in northern New Jersey, on Long Island, and on Narragansett Bay; in Maine it breeds both on the coast and in the interior. In the rest of New York and New England it is a rather common migrant, both on the coast and inland, in April and May, and in September and October. Its habit of plunging into the water from a height is, of course, characteristic. When not fishing, its great extent of wing, and its *white head and under parts* distinguish it.

American Sparrow Hawk. *Falco sparverius*

♂ 9.50. ♀ 10.75

Ad. ♂. — *Upper parts* conspicuously *reddish-brown;* head, when seen near to, slate-blue, with a large reddish-brown spot; throat and cheeks white, a black mark from in front of the eye along the side of the throat, another from back of the eye; wings slate-blue; tail tipped with black; large black spots on belly and side. *Ad.* ♀. — Very similar, but with more reddish-brown on the wings; no black band across tip of tail.

Nest, in a hole in a tree, or in a tower. *Eggs,* varying from white, with few markings, to deep buff, more or less speckled with brown.

The Sparrow Hawk is a summer resident of New York and New England; it is nowhere common, and in the upland of northern New England it does not occur. It is a common spring and fall migrant along the coast, and an occasional winter visitant from eastern Massachusetts southward. It frequents extensive meadows, where a few tall trees here and there furnish it with posts of observation and a breeding-site in some dead limb. It often hovers over the grass, with tail broadly spread, the wings rapidly vibrating forward of the almost perpendicular body. Just after alighting the tail is *tilted once or twice.* During the court-

ship the male performs evolutions in the air, dropping rapidly from a height, uttering a note like the syllables *killy, killy.*

The small size of this hawk will distinguish it from all other hawks except the Sharp-shinned and the rather rare Pigeon Hawk, and from each of these the *reddish-brown* of the *back* and *tail* at once distinguishes it. In flying, the Sparrow Hawk takes rapid strokes, and does not alternate these regularly with intervals of gliding, as the Sharp-shinned Hawk does. The tail of the latter extends far out behind him as he circles high in the air; the former's wings reach well toward the tip of the tail, so that its tail does not show as conspicuously. The Sparrow Hawk's wings are long and narrow; the Sharp-shinned Hawk's are short and broad. (See Frontispiece.)

Pigeon Hawk. *Falco columbarius*

♂ 10.00. ♀ 13.00

Ad. ♂. — Upper parts *bluish-gray;* under parts white, streaked with black, the throat lightly, the rest heavily. *Ad.* ♀ and *Im.* — Upper parts brownish; under parts as in male.

The Pigeon Hawk is a somewhat rare migrant in New York and New England in April, September, and October, more common along the coast; it is an occasional winter visitant. When a student has thoroughly learned the difference in appearance and flight between the Sparrow Hawk and the Sharp-shinned Hawk, between a Falcon with long, narrow wings, and an Accipiter with short, rounded wings, he will be able, if a good opportunity offers, to identify a Pigeon Hawk. If a small hawk has a powerful head and shoulders, long narrow wings reaching well toward the tip of the tail, and the rapid flight of a falcon, and yet has a brownish (not reddish-brown) or a slaty-blue back, it can be no other than the Pigeon Hawk.

Duck Hawk. *Falco peregrinus anatum*

♂ 16.00. ♀ 19.00

Ad. — Top and sides of head black, *throat inclosed by two broad black stripes;* rest of upper parts, wings, and tail bluish-gray; tail crossed with narrow black bars; throat and breast buffy, or white; belly buffy, crossed with narrow black bars. *Im.* — Upper parts blackish-gray, the feathers edged with brown; black bars bordering throat, as in adult; throat buffy; rest of under parts buffy or yellowish-brown, thickly streaked with black.

Nest, on steep cliffs. *Eggs,* varying from buffy to brown, sometimes plain, sometimes spotted, or blotched.

The Duck Hawk breeds here and there on a few steep cliffs along the Hudson and in New England. Mount Tom and one or two other cliffs in Massachusetts, Eagle Cliff and Dixville Notch, N. H., and Lakes Willoughby and Memphremagog, Vt., each has an eyrie of these noble hawks. In most of New England the bird is a rather rare migrant or a still rarer winter resident. In April and May, and again in September and October, it is not infrequently seen along the sea-shore, where it preys on the sea-fowl and shore birds. When one approaches the cliff where a pair are breeding, the parents become much agitated, and fly up and down with a loud, harsh cry. The Duck Hawk may readily be known by its size, by the cut of its wings and tail, and by *the black "mustaches."*

Bald Eagle. *Haliæetus leucocephalus*

♂ 32.85. ♀ 35.50

Ad. — *Head, neck, and tail white;* rest of plumage dark brown. *Im., second or third year.* — Head and neck blackish; rest of upper parts mixed grayish-brown and blackish; under parts mixed white and dark. *Im., first year.* — Whole plumage nearly uniform black; under parts more or less spotted with whitish.

Nest, on tall trees, sometimes on cliffs. *Eggs,* white.

The Bald Eagle is a permanent resident of the lower Hudson Valley and along Long Island Sound, and a rare

winter visitant in southeastern New Hampshire. It is a summer resident of the Maine coast and of some of the large lakes of northern New England. Elsewhere in New England it is a rare migrant, occurring in May and at almost any time during the summer. It frequents bodies of water at all times, feeding on the dead fish and other refuse cast up on the shore.

An old bird, with white head and tail, is unmistakable; in the brown immature plumage the eagle can be told from one of the larger hawks only by its great size and by its proportions. The wing is twice as long as the tail, so that the whole extent of the spread wings from tip to tip is six or seven times the length of the tail.

AMERICAN ROUGH-LEGGED HAWK. *Archibuteo lagopus sancti-johannis*

♂ 21.50. ♀ 22.50

Ad., normal phase. — Head and neck whitish, streaked with brown; rest of upper parts brown, streaked with lighter tints; *base of the tail whitish*, barred with black; lower parts dark brown, spotted with white. *Im., normal phase.* — Similar, but lower parts whitish or buffy, streaked on the breast with brown, and crossed over the belly by a broad band of deep brown.

Both old and young have so-called melanistic phases, in which they vary from deep black to forms a little darker than the normal.

The American Rough-legged Hawk is a very rare migrant or winter resident in New York and New England. It was formerly a common migrant through the Connecticut Valley. "The Rough-leg is one of the most nocturnal of our hawks, and may be seen in the fading twilight watching from some low perch, or beating with measured noiseless flight over its hunting-ground. It follows two very different methods in securing its food: one by sitting on some stub or low tree and watching the ground for the appearance of its prey, as the Red-tail does; the other by

beating back and forth just above the tops of the grass or bushes, and dropping upon its victim, after the manner of the Marsh Hawk" (Fisher).

The *whitish base of the tail* and its length help to identify this hawk in the light-colored phase; care, however, must be taken not to mistake the much commoner Marsh Hawk, which has pure white upper tail-coverts, for a Rough-leg. The former I have never seen light on a tree; the latter often watches for its prey from a perch; the flight of the former is light, the latter's heavy.

Broad-winged Hawk. *Buteo platypterus*

♂ 14.00. ♀ 17.00

Ad. — Upper parts dark brown; tail dark, crossed by two to four broad bands of light gray or whitish, which show from below; under sides of quill-feathers white, tipped with black; under parts brownish, spotted with white. *Im.* — Upper parts dark brown; tail duller, with fainter bars; cheeks with rather distinct dusky streaks or "mustaches;" under parts white or buffy, heavily streaked with black.

Nest, in trees, from twenty-five to fifty feet up. *Eggs*, buffy-whitish, spotted with brown.

The Broad-winged Hawk is a summer resident of New York and New England. In some parts of northern New England it is the commonest hawk, but it is rare or absent in many localities. It arrives in April, and leaves in September. It is a bird of wooded hills, and disappears if the country is cleared.

If a student has become familiar with the commoner hawks, and can recogniże a Buteo by the cut of the wings and tail, he may hope under favorable conditions to identify a Broad-winged Hawk. It is decidedly smaller than a Red-shouldered Hawk, and has in the breeding season a cry that resembles the note of the Wood Pewee. It is the most unsuspicious of our hawks, especially about the nest. In the adult the dark bars across the tail show distinctly

from below; a large part of the *under side of the wings* when spread is *white* without any barring, and offers a marked contrast to the *black tips.*

RED-SHOULDERED HAWK. *Buteo lineatus*

♂ 18.30. ♀ 20.35

Ad. — Bend of wing and *under parts reddish-brown;* tail black, crossed with five or six narrow white bars. *Im.* — Upper parts dark brown, spotted with white; tail dark, crossed with grayish bands; under parts whitish, streaked or spotted with brown.

Nest, in large trees, from fifty to seventy-five feet up. *Eggs,* white or whitish, spotted with brown.

The Red-shouldered Hawk, called Hen Hawk by the farmers, is the commonest hawk in southern New England and the lower Hudson Valley. It is a permanent resident, but less common in winter than in summer in the northern portion of its range. It becomes rare at the edge of the Canadian Zone. It may be seen circling high overhead, often screaming *tēē'-ur tēē'-ur,* or a pair may be seen over low, swampy woods, screaming, and soaring higher and higher, till they become mere specks in the blue. In fall and winter it often perches on some favorite tree, watching for mice or frogs in the low meadows or swampy grounds. The Red-shouldered Hawk is not swift enough to pursue many birds on the wing, as the Falcons and Accipiters do; it either watches the ground from a perch, as above described, or when soaring high overhead, scans the ground or trees beneath it for mice, squirrels, rabbits, and occasionally birds. When it sees its prey, it closes wings and tail, and drops swiftly down upon it.

Adults have *reddish-brown under parts,* and may be thus distinguished from Red-tailed Hawks; but immature birds of both species differ very little, and can hardly be distinguished unless killed. The notes of the two, however, differ, and in spring and summer are excellent means of

identification. The scream of the Red-shouldered Hawk is identical with one of the notes of the Blue Jay; it can easily be imitated by whistling. The scream of the Red-tailed Hawk is higher, more sputtering, more of a squeal than a scream.

Red-tailed Hawk. *Buteo borealis*

♂ 20.00. ♀ 23.00

Ad. ♂. — Upper parts brown; *tail deep reddish;* under parts white, more or less heavily streaked with brown. *Im.* — Similar to adult, but tail brown, crossed by numerous blackish bands.

Nest, in tall trees. *Eggs,* dull white, more or less spotted with brown.

The Red-tailed Hawk breeds throughout New England and the Hudson Valley, but except in the wilder and more hilly portions of New England it is less common than the Red-shouldered Hawk. Though the species is a permanent resident, there is a regular migration in spring and fall; sometimes a large number pass over in a day. The bird's hunting and nesting habits are similar to those of the Red-shouldered Hawk; its notes have already been described (see preceding species). In the glens among the mountains the high, sputtering cry of the Red-tailed Hawk is a not uncommon sound, and a day hardly passes without a sight of the majestic bird soaring overhead. Even when the hawk is high in air, if it is an adult, the *reddish tail* shows as the bird wheels. (See plate facing page 246.)

American Goshawk. *Accipiter atricapillus*

♂ 22.00. ♀ 24.00

Ad. — Top of head and region back of the eyes *black,* a *white line over* the eye; rest of upper parts, wings, and tail bluish-gray; under parts white, everywhere streaked and barred with dark gray. *Im.* — Upper parts brown, spotted especially about the head with whitish; tail and under parts white, streaked and spotted with brown.

Nest, of sticks in trees. *Eggs*, white, sometimes faintly marked with brownish.

The Goshawk is a rare summer resident of the Canadian Zone, where it is confined chiefly to the deep forests of the higher mountains. In the autumn and winter, at irregular intervals, Goshawks appear in southern New England and the Hudson Valley in considerable numbers. They are extraordinarily bold and rapacious, and fly, when hunting, with great speed.

An adult is a very beautiful bird, the slaty gray of the back and fine gray barring on the white under parts giving it a lighter tone than any other hawk, except the adult male Marsh Hawk. The *black cap* and the *white line over the eye* are also distinctive marks. An immature bird could hardly be told from a large Cooper's Hawk, unless killed and measured.

Cooper's Hawk. *Accipiter cooperii*

♂ 15.50. ♀ 19.00

Ad. ♂. — Upper parts dark gray, bluish-gray in strong light; top of head blackish; tail crossed by several blackish bands; under parts white, closely barred with reddish-brown; tail rounded. *Ad.* ♀. — Duller than the ♂. *Im.* — Upper parts dusky brown; lower parts white, striped with brown, the sides barred with the same.

Nest, in high trees, often a deserted crow's nest. *Eggs*, bluish-white, rarely spotted with pale brownish.

The Cooper's Hawk, called Chicken Hawk by the farmers, is a not uncommon summer resident throughout southern and central New England and the lower Hudson Valley; it occurs sparingly on the uplands of central New England, but is absent from the deep forests of the Canadian Zone. It is a rare winter resident in the vicinity of New York city. The Cooper's Hawk is bold, strong, and swift, and destroys more poultry and wild birds than any other hawk. When the nesting-site is approached, the birds utter cries like "a Flicker's laugh or a tree-toad's trill magnified" (F. H. Allen).

The male is hard to distinguish from a female Sharp-shinned Hawk, but the female is considerably larger. Her long tail and manner of flight ought easily to distinguish her from the other common large hawks, the Red-shouldered and the Marsh Hawk. The Red-shouldered Hawk soars or circles high in air, with a cut of wings and tail like that of the Red-tailed Hawk shown in plate facing page 246; the Marsh Hawk glides low over meadows and marshes, and sooner or later shows the large white spot at the base of the tail. The Cooper's Hawk either flies fairly high, the powerful wing-strokes alternating with periods of gliding, during which the length of tail is evident, or, when hunting, flies rapidly over the tops of bushes and between the trees. When a Cooper's Hawk perches, the tail projects well below the wings, and is crossed by blackish bands. The breast is either finely barred with reddish-brown, or streaked with blackish or reddish-brown.

Sharp-shinned Hawk. *Accipiter velox*

♂ 11.25. ♀ 13.50

Ad.— Upper parts grayish-brown; tail crossed with blackish bars; under parts white, streaked with reddish-brown. *Im.*— Resembles immature Cooper's Hawk, but tail square.

Nest, usually in trees. *Eggs*, white, greenish-white, or bluish-white, usually heavily blotched with brown.

The Sharp-shinned Hawk is a common migrant throughout New England and New York, occurring in April, September, and October. It is rare in the breeding season in New England, and still rarer in winter; but it is a common permanent resident of the lower Hudson Valley. The Sharp-shinned Hawk is the commonest small hawk in spring and fall, and the most destructive to bird-life. Often a hush falls over the thickets which a moment before were full of song and fluttering wings; if we glance upward at such a time, we can generally discover a small hawk drifting over,

taking a few strokes, then gliding forward on spread wings, or wheeling motionless.

Its *long tail* and *short, rounded wings*, and the *alternation of wing-stroke* and *periods of gliding*, mark it as either a Sharp-shinned Hawk, or a near relative, the Cooper's Hawk, and distinguish it from the other small hawk, the Sparrow Hawk. When pursuing its prey, however, it does not stop to glide, but flies with rapid wing-strokes, dashing into a thicket where the frightened birds have taken refuge. It is then to be distinguished from the Sparrow Hawk by the entire absence of reddish-brown on the back. When it perches, it chooses a limb more or less in shadow; its tail extends some distance beyond its folded wings, and is crossed with several blackish bars. There is no way of surely telling a large female Sharp-shinned Hawk from a small male Cooper's Hawk; the male of the smaller species and the female of the larger may, however, always be told by their size. When the nest is approached, the parents utter a cry suggesting "a Hairy Woodpecker's long call" (F. H. Allen). (See Frontispiece.)

MARSH HAWK. *Circus hudsonius*

♂ 19.00. ♀ 22.00

Ad. ♂. — Upper parts light bluish-gray; tail crossed by black bars; *upper tail-coverts* (over the base of the tail) *pure white;* throat and breast gray; belly white, flecked here and there with brown; under surface of the wings white; wings tipped with black. *Ad.* ♀. — Upper parts brown; *"rump" white;* lower parts buffy-whitish; breast thickly streaked with brown. *Im.* — Upper parts similar to ♀; lower parts rich rusty, streaked with brown on the breast, paler and unstreaked on the belly.

Nest, on the ground, in wet meadows. *Eggs*, white or bluish-white, often spotted with pale brown.

The Marsh Hawk is a summer resident throughout New England and New York. It winters sparingly in southern New England and the lower Hudson Valley. It arrives in

March or April, and stays till October. The usual haunts of the bird are extensive meadows, where it hunts mice and frogs by gliding low over the grass and occasionally dropping to the ground, beating up and down apparently in a regular course. It is found, however, even in the hills, where there are only restricted swampy tracts. In the breeding season the male performs aërial revolutions, dropping from a height, turning, and screaming in his descent. When the nest is approached, the parents swoop at the intruder, uttering cries like the syllables *geg, geg, geg.*

When it flies low, the *pure white upper tail-coverts* offer an unmistakable field-mark; they are especially conspicuous in the brown birds, the females and immature males. The adult male is a beautiful bird, the delicate *gray* shade of its plumage and the *black-tipped wings* suggesting a gull. Sometimes the Marsh Hawk is seen at a considerable height; at such a time its long tail distinguishes it from the Red-shouldered Hawk, and its long wings from the Cooper's Hawk.

PIGEONS: ORDER COLUMBÆ

PIGEONS: FAMILY COLUMBIDÆ

MOURNING DOVE. *Zenaidura macroura*

11.85

Ad. ♂. — Back of head bluish-gray; rest of head and neck pinkish-brown, sides of neck with metallic reflections; a small black spot below the ear; back, and wings and tail when closed brown; outer tail-feathers and wing-feathers, when opened, bluish; the outer *tail-feathers* much shorter than the middle pair, banded with black, *tipped with white;* breast pinkish-brown; belly buffy. *Ad.* ♀. — Similar, but duller; hardly any bluish on head. *Im.* — Duller and browner than ♀.

Nest, a loose platform of sticks, generally in trees, not over ten feet from the ground. *Eggs,* two, white.

RED-TAILED HAWK (upper); MARSH HAWK (lower)

The Mourning Dove is a summer resident of central and southern New England and of the Hudson Valley, arriving late in March, and remaining till October. Though found as far north as Concord, N. H., it is generally rare north of southern Connecticut, or only locally common in the broader river valleys. It frequents sandy plains and the edges of old fields, particularly in the neighborhood of pine groves and of orchards, in both of which it nests. In late summer it feeds on the stubble of grain-fields, and is not infrequently to be seen from the cars, as it flies off at the approach of the engine. Its notes, heard in early spring, particularly at sunrise and sunset, are like the strokes of a distant bell, low and sweet, but mournful. They may be written thus: *coo-ah, cōō, cōō, cōō.*

Fig. 72. Tail of Mourning Dove

When a dove flies from the ground, it often lights in some tree near by; its long, *rounded tail,* marked with black and deeply *tipped with white,* serves as an excellent field-mark. At a distance the general appearance of the bird is brownish, but it is readily told by its pigeon-like aspect, and by its flight, which is very swift, rather low, and is accompanied by a noticeable whistling sound. (See Yellow-billed Cuckoo, p. 227.)

Note. — The Wild Pigeon (*Ectopistes migratorius*), formerly seen in innumerable multitudes, is now practically extinct in New England. Any bird which answers fairly well to the description of the Pigeon, unless seen in the woods of northern New England or by a very well trained observer, is probably the Mourning Dove.

GALLINACEOUS BIRDS: ORDER GALLINÆ

PHEASANTS: FAMILY PHASIANIDÆ

The Ring-necked Pheasant (*Phasianus torquatus*) and the English Pheasant (*Phasianus colchicus*) have been introduced in various places in New York and New England, and have become well established here and there.

GROUSE, BOB-WHITE, ETC.: FAMILY TETRAONIDÆ

Though there are four species belonging to the Grouse family in New York and New England, two are so rare or local that few observers will meet them. The Ruffed Grouse or Partridge is everywhere distributed. The Quail or Bob-white is common from Massachusetts southward. The Spruce Grouse is a permanent, though rather rare or local, resident of extensive spruce forests in northern New York and New England. On Martha's Vineyard a very small colony of the Heath Hen are the last representatives on the Atlantic coast of the Prairie Hen so common in the West.

Heath Hen. *Tympanuchus cupido*

18.00

Ad. ♂. — Upper parts brownish, barred with black and buff; under parts white, barred with brown; sides of the neck with tufts of stiff, rather long black feathers. Tail grayish-brown, *without bars or bands*, except a whitish tip. *Ad.* ♀. — Similar, but neck-tufts much shorter. Tail barred with buff or light brown.

Nest, on ground. *Eggs*, creamy buff, with a slight greenish tinge.

The Heath Hen is the eastern representative of the Prairie Hen of the West, and though formerly found along

the Atlantic coast from Massachusetts to Virginia, is now confined to the island of Martha's Vineyard, where it is a permanent resident. Only a small number of Heath Hens still survive, and the great plains of oak scrub in which they live are so extensive that it is only by chance that one meets them. A guide is necessary, and repeated visits must be made to insure even a chance of success. The male in spring inflates two yellow sacs on each side of the neck and utters a booming sound which can be heard over a mile away. The lack of a broad black band across the base of the tail should distinguish the Heath Hen from the Ruffed Grouse.

RUFFED GROUSE. *Bonasa umbellus*
CANADIAN RUFFED GROUSE. *Bonasa umbellus togata* } PARTRIDGE

17.00

Ad. ♂. — Upper parts and wings reddish-brown or gray, streaked with black; large tufts of glossy black feathers on the sides of the neck; tail broad, reddish-brown or gray, crossed by a *broad band of black near the tip;* throat buffy; rest of under parts white, tinged with buffy, and barred, particularly on the sides, with blackish-brown. *Ad.* ♀. — Similar, but smaller; neck-tufts small or almost wanting.

Nest, on the ground in woods. *Eggs,* buffy, usually unmarked, sometimes slightly speckled with brown.

The Partridge, as it is usually called in the north, is a common permanent resident of New York and New England. It is exclusively a woodland bird, only appearing in open country when it has lost its way. It frequents all kinds of forest growth, and is equally at home in swamps and upland. As one walks through the undergrowth, a Partridge often starts off directly at one's feet, with a loud whirring of wings. In summer the female frequently tries to divert attention from her young by feigning a broken wing, sometimes circling within a few feet of

an observer, whining piteously. When the woods are again quiet, she may be heard mewing and clucking to the young, who have been hiding in the dry leaves and now rejoin her.

From March to May the drumming of the male is a constant sound in swampy woods. It begins with hollow thumping sounds, separated by slight intervals; these soon run rapidly into one another, and the performance ends in a reverberating roll. The best explanation of the drumming of the Partridge is that of Mr. Brewster, who is convinced "that the bird's wings strike neither its body nor the log [on which it stands], but simply the air, and that the sound which they produce while the Partridge is drumming is essentially the same as that heard when it starts in flight" (Minot, p. 409, note). The drumming is rare in midsummer, but is not infrequently heard on warm days in the autumn. At night Partridges roost in trees, and where they are not shy they often fly to a tree when startled and watch the intruder from their perch. On winter afternoons they often burrow into the snow and spend the night in this shelter. Their tracks are frequent in the winter woods, for they walk rather than fly from place to place, making long lines in various directions. When they do fly, their outspread wings leave one or two impressions just beyond the end of their track. In summer they frequently dust themselves in the road, and, like many birds, seem little alarmed by the approach of a carriage.

The male may be told from the female by his larger size, longer tail, and more conspicuous ruff of black feathers, formed by prominent tufts at each side of the neck. The widespread tail varies in color from gray to reddish-brown. The Grouse found on the upland of western Massachusetts and in northern New York and New England has grayer upper parts, more distinct barring on the breast and belly, and generally a grayer tail; it is known as the Canadian Ruffed Grouse.

CANADIAN SPRUCE GROUSE. *Canachites canadensis canace*

15.00

Ad. ♂. — Upper parts barred with *black* and gray; under parts black, many of the feathers bordered or tipped with white; tail black, tipped with reddish-brown; a line of bare *skin above the eye bright red.* *Ad.* ♀. — Upper parts barred with black, gray, and pale yellowish-brown; under parts whitish, barred with black.

Nest, on the ground. *Eggs*, buffy or pale brownish, spotted with brown.

The Spruce Partridge, as it is commonly called by the lumberman, to distinguish it from the Birch Partridge or Ruffed Grouse, is a permanent resident of the heavy coniferous forests of northern New England and New York. It is rarely seen south of the White Mountains, and is nowhere in New England at all common. It is found, as its name suggests, in dense swampy growths of spruce and fir. It is remarkably tame, allowing such a near approach that it should be impossible to confuse it with its relative, the Ruffed Grouse, which, except for its ruff, has hardly any of the black shade so characteristic of the Spruce Grouse.

BOB-WHITE; QUAIL. *Colinus virginianus*

10.00

Ad. ♂. — Line over eye white, bordered above and below with black; top of head reddish-brown, mixed with black; back of neck reddish-brown, mixed with white; *back* and *wings* chiefly *reddish-brown;* tail gray; *throat white;* band across upper breast black; breast and belly white, barred with black; sides heavily washed with reddish-brown. *Ad.* ♀. — Similar, but throat and line over eye buff; little or no black on the breast.

Nest, on the ground, in meadows or grain-fields. *Eggs*, white usually more or less stained with light brown.

The Quail is a permanent resident of the Transition Zone, common in southern New England and the lower Hudson Valley, but rare or absent from the upland of west-

ern Massachusetts, and north of that State found only in the valleys where the winters are not severe. (See map, p. 15.) It frequents scrubby growth, where bushes alternate with small trees, especially in the neighborhood of farming country. Here the male may be heard from May to August, whistling his vigorous *Bob-White*, or *oh-Bob-White*. When singing, the male is often perched on a fence, wall, or limb of a tree, and an answer may bring him flying angrily up. Later in the summer and all through the fall a covey of birds, if scattered, call to each other by a note like the syllable *quoit*, suggesting a note of the guinea hen.

FIG. 73. Bob-white

Quail tracks may often be seen in the snow; they are smaller than those of the Grouse, or Partridge, occur in more open country, and are generally more numerous, the Grouse being in winter a more solitary bird. When the Quail is startled, it flies with great speed, and then scales with wings bent downward in a sharp curve. The small size should distinguish a Quail from a Grouse when flying; the latter, moreover, is not so richly colored, and has a much broader, fan-shaped tail, tipped with black.

SHORE BIRDS: ORDER LIMICOLÆ

TURNSTONES: FAMILY APHRIZIDÆ

RUDDY TURNSTONE. *Arenaria morinella*

9.50

Ad. — Top of head grayish-white; *breast* and line about eye *black;* back and wings warm reddish-brown, mottled with black;

three stripes of white on the back showing in flight; white showing in wings in flight; legs red. *Im.* — Upper parts brown, streaked with gray; lower back, wings, and tail in flight, similar to adult; sides of throat and breast dark brown; rest of under parts white.

The Turnstone is a not uncommon migrant along the sea-coast in May, and again in August and September, feeding on the outer beaches either in small flocks by itself or in company with Ring-necks, Sanderling, and "Peep." It may readily be distinguished from any of these species by its size (it is larger than a Ring-neck) and by its striking colors. In the adult plumage, the *black breast*, rich reddish-brown back, and red feet are very noticeable when it is feeding, and when it flies the *display of white*, formed by stripes down the middle and sides of the back and along the wings, makes a striking pattern. The young birds may be known by the same pattern of white which shows in flight. The Turnstone's call-note is a chuckling whistle.

PLOVERS: FAMILY CHARADRIIDÆ

Five species of Plover occur in New York and New England. The Killdeer is rare and occurs only as an accidental migrant or as a local summer resident. The Golden Plover is a regular autumn migrant, but is far less common than the Black-bellied Plover, and is becoming steadily rarer. The Black-bellied Plover, the Beetle-head of the gunners, is not uncommon on mud-flats and sand-bars. The Piping Plover breeds not uncommonly on the sandy beaches of Long Island and Martha's Vineyard, and sparingly on Cape Cod and on the Maine coast; it occurs also as a not uncommon migrant at other beaches in New England. The Semipalmated Plover, the Ring-neck of the sportsmen, is by far the commonest member of the family. It associates regularly with the smaller sandpipers, either on the beaches or in the sloughs in the marshes. Plover may be told from

sandpipers by their shorter bills. All but the Black-bellied Plover have a habit of bobbing the head as they stand.

Piping Plover. *Ægialitis meloda*

7.00. Bill .50

Ad. ♂. — Forehead, throat, and ring around neck white; forward part of crown black; *a partial ring*, broken in the middle of the breast, *black;* rest of upper parts light brownish-gray; tip of tail black; breast and belly white; base of bill orange, tip black; feet yellow. *Ad.* ♀. — Similar, but the black bars tending toward brownish, and less distinct.

Eggs, laid in a hollow on little pebbles on the open sand, creamy white, speckled or spotted with dark brown.

The Piping Plover is one of the few waders that breed on the coasts of New York and New England; it may therefore be looked for in June and early July, when there is only the Spotted Sandpiper from which it must be distinguished. It also occurs as a regular but not common migrant in April and May, and again in August and September. It breeds on the sand-beaches of Long Island, Martha's Vineyard, and the adjoining islands, and sparingly on Cape Cod, at Ipswich, Mass., and on the Maine coast.

Fig. 74. Piping Plover

Its sweet but mournful call consists of two notes, *pĭ-pee'*, the first very short and about half an interval above the second. The bird frequents the upper part of the beach, where its pale colors harmonize so perfectly with the dry sand that it is often invisible till it starts to fly. It bobs, like its relative the Semipalmated Plover, but may be dis-

tinguished by its lighter color, and by the difference in the black collar, which in the Piping Plover *does not cross the breast.*

Semipalmated Plover; Ring-neck. *Ægialitis semipalmata*

6.75. Bill .50

Ad. — Forehead white ; forward part of crown, stripe under each eye and over bill black; throat and narrow ring around neck white ; *band across breast and neck black ;* rest of upper parts grayish-brown ; rest of under parts white ; legs yellow ; base of bill orange ; tip black.

The Semipalmated Plover, or Ring-neck, is a common migrant along the sea-coast in May, and again from the middle of July to October.

Fig. 75. Semipalmated Plover

Ring-necks frequent the beaches and mud-flats exposed at low tide. They are not, as a rule shy, and if startled, fly only a short distance, uttering as they rise a sweet call, *chee-wee*, as characteristic of the mud-flats and beaches as the *kew, kew, kew, kew* of the Yellow-legs is of the grassy marshes. They are often associated with the smaller sandpipers known as "Peep" (see p. 267), or with their larger relative the Black-bellied Plover; their bobbing readily distinguishes them from the Peep. They are much commoner than the Piping Plover, and are a darker shade of brown on the back, the color of wet rather than of dry sand. The *black ring encircles the breast*, while in the Piping Plover the black bands from each side of the breast do not meet.

Killdeer. *Oxyechus vociferus*

10.50

Ad. — Head and back brown ; ring entirely around neck white, edged on the hind neck with black ; forehead, stripe over eye, throat, and lower parts white ; *two black* bands across breast, the lower one narrow ; *rump* and base of tail *cinnamon.*

Nest, on ground. *Eggs*, buffy-white, with chocolate markings, chiefly at the larger end.

The Killdeer is a rare summer resident in southeastern Massachusetts and Rhode Island, and a rare spring and fall migrant along the coast. It occasionally appears in western Massachusetts, and on Long Island has been recorded in every month but January. In the breeding season it is noisy and restless, continually uttering the complaining *kill-dee*, from which it gets its name, and occasionally a rolling whistle a little like that of the Upland Plover. Like most of the plovers, it bobs constantly. It may be readily distinguished from the smaller Ring-necks by the *two* bands of black and by the *cinnamon rump* and *base of tail*, which are conspicuous in flight.

Fig. 76. Killdeer

The Killdeer's wings are long and narrow, and its flight graceful and vigorous, suggesting somewhat that of the Sparrow-Hawk.

American Golden Plover. *Charadrius dominicus*

10.50. Bill .90

Ad. in breeding plumage. — Top of head and upper parts black, spotted with bright yellow and white; tail dark grayish-brown, barred with white, tinged with yellow; a white line from forehead passes over the eyes, and broadens into a wide patch on the side of the breast; sides of head, neck, throat, and under parts black. *Ad. in late summer and fall.* — Upper parts as in spring, but duller; under parts white, with a few grayish-brown feathers on neck and breast. *Im.* — Upper parts dusky, mottled with dull whitish spots, becoming yellow on the rump; under parts ashy, especially on neck and breast.

The Golden Plover is a migrant along the coast, extremely rare in spring and rather rare in fall, passing north in May, and returning from the end of August to November. It is occasionally found on the flats left bare by the tide, but is more likely to occur well up on the beach, or still more frequently on the short grass of marshes or hillsides, especially where the ground has been burned over.

The call of the Golden Plover is a bright whistle, *queep, quee-lee-leep*, without the mournful character of the Black-belly's call, and with no modulation. It has also a note like the syllable *queedle*. Immature birds resemble young Black-bellied Plover, but are much less common. They may be distinguished at close range by the *absence* of the *whitish tail*, and of the white in the outspread wings. The Golden Plover bobs regularly and the Black-belly rarely, if ever.

Black-bellied Plover; Beetle-head. *Squatarola squatarola*

11.00. Bill 1.10

Ad. in spring. — Hind head and back black, spotted and barred with white; *tail white*, barred with brownish-black; *wings showing white in flight;* sides of head and neck, throat and breast, and upper belly black, bordered by white on each side, the white

border meeting over the forehead; feathers under the raised wings black. *Ad. in late summer and fall.* — Upper parts dark brown, speckled with white; under parts white, with an occasional black feather; tail and wings as in spring. *Im.* — Upper parts lighter and with a golden shade on each feather; under parts white.

The Black-bellied Plover is a rather common migrant along the coast in spring and fall, passing north in May,

Fig. 77. Black-bellied Plover, Immature

and returning from late July to November. The young birds which appear in August are called Beetle-heads by the gunners; as they are more numerous than the adults and far less wary, they are more often seen by students. Both old and young frequent the mud-flats and sand-bars left bare by the tide; here they feed either alone or in company with Ring-necks, Turnstones, and Peep. They scatter when feeding like Ring-necks and stand about heading in different directions, or after a short run, pick something from the sand. So far as I know, they do not bob, though all our other plovers do.

The notes of the Black-belly are among the most musical uttered by shore-birds; the call most often heard, either

from flying or standing birds, consists of three syllables, all legato, the first prolonged, the second a bit lower and short, the last higher than the first. They are not unlike the *toor-a-wee* of a bluebird, but are lower in pitch, more prolonged and mournful. When feeding with other birds, the Black-bellies may easily be distinguished by their greater size; the *whitish tail* and the *white in the wing* readily identify them in flight. It is quite possible for a sharp eye to note the black axillars, — the long feathers close to the body under the raised wing, — either just as the bird raises his wings to fly, or as he takes his strokes.

SNIPES, SANDPIPERS, ETC.: FAMILY SCOLOPACIDÆ

The Sandpipers constitute a numerous family, many of which are so rare on our northeastern coast that only an inveterate gunner can hope to find them. There are about seventeen species which occur in New York and New England regularly. These may all be distinguished after a certain amount of practice without the use of a gun. One species, the Woodcock, is rarely found away from the cover of trees or bushes, and several other species occur inland more commonly than along the coast. The Snipe frequents freshwater marshes. The Upland Plover (really a Sandpiper) breeds on upland pastures, chiefly in New Hampshire and Vermont, but occurs as a migrant on grassy hills along the coast. The Solitary Sandpiper is a regular migrant inland, and the Spotted Sandpiper, though a very common summer resident along the coast, is equally common on inland ponds and streams. The other Sandpipers are preëminently seashore birds, though like the sea ducks they not infrequently visit large bodies of fresh water. Several of them, including the two Yellow-legs and the Pectoral Sandpiper, are birds of the marshes, feeding in the pools that abound

throughout the tall salt-marsh grass. The Least Sandpiper, though frequent on the beaches, is more common on the pools or sloughs in the marshes. The Semipalmated Sandpiper, the White-rumped Sandpiper, the Sanderling, the Knot, and the Dunlin feed either on the beach at the very edge of the ocean, or on extensive mud-flats. The Curlew is rare; it may be met with either on the beach, particularly on a muddy shore, or on a grassy upland. The Purple Sandpiper is a winter visitant, and keeps to rocky ledges generally well off shore. Many of the shore-birds return very early from the north; after the first week in July there is a constant succession of them. The Dunlin comes in September, and the Winter Yellow-legs stays till late in the fall. The young birds appear considerably later than the old ones, and are much less suspicious.

Sandpipers fly in flocks, often made up of several species, and frequently accompanied by their relatives, the Plover (see p. 253). They are easily decoyed, especially where they are not made wild by constant shooting. There are two methods of studying them; one is to lie concealed in a blind before which stand decoys, among which the birds alight, if attracted by an imitation of their whistle; the other method is to walk along the beach or over the marsh, taking advantage of natural shelter and stalking the birds that may be feeding here and there. Many of the smaller birds may in this latter way be successfully observed.

It must be borne in mind that many of the following species, though termed common, are not common, except in just the places best suited to them. These places, moreover, are in the possession of sportmen's clubs or hotels, and the birds that light here are pretty thoroughly shot off; one may therefore see more Knots, for instance, in the ice-chest of such a hotel than in many days' tramping over less favorable ground. A Sunday spent at Monomoy or at some famous Long Island resort would be very profitable,

especially if one hired a gunner (without his gun) and occupied a blind.

HUDSONIAN CURLEW; JACK CURLEW. *Numenius hudsonicus*

17.00. Bill 3.75

Ad. — Top of head blackish, with a central whitish stripe; line over eye white; line through eye brown; rest of upper parts and tail brown, speckled with white; throat and belly white; neck and breast thickly streaked with dusky. *Bill long and curved.*

The Hudsonian Curlew is a rather uncommon migrant along the coast in May, and again in August and September. It occurs on mud-flats and on sandy beaches, either at the edge of the water or walking in the shallow pools, picking up food from the water with the head apparently held sidewise. It often stands when undisturbed, with one leg uplifted and crooked, or squats with its breast on the sand. It also frequents grassy hills near the sea. In spring the curlew utters a sweet mournful cry, like the syllables *kur-lew ;* its ordinary call-note and cry when startled sounds like *pip-pip-pip-pip.* The general *brown* tone of the *plumage* and the *long curved bill* make it impossible to mistake the Jack Curlew for anything except a smaller species, the Eskimo Curlew, which was formerly common, but is now extremely rare.

SPOTTED SANDPIPER. *Actitis macularia*

7.50. Bill .95

Ad. — Upper parts light brown ; under parts white ; everywhere marked with roundish *spots of blackish ;* a row of white spots on the wings show in flight as a white stripe ; the outer tail-feathers barred with white. *Im.* — The under parts white, unspotted, washed on the breast with grayish.

Nest, on the ground, of dried grasses and straw, in a field or pasture, often at some distance from water. *Eggs,* buffy, thickly speckled with dark brown and black.

The Spotted Sandpiper is a common summer resident of New England and New York, along the coast and also along the margins of inland ponds and streams, arriving late in April and staying till late in October. It is the only bird with the long bill and legs of a sandpiper regularly found on *inland* waters in June and early July, and, except the Solitary Sandpiper, is at any season the only sandpiper commonly seen on the margins of small inland ponds and rivers. On the ground, its tail and the hinder part of its body are repeatedly tipped upward; when it flies, its long narrow wings after a few strokes are held so as to form a crescent, which swings first to one side and then to the other close over the water.

As it flies it utters a loud *peep, peep, peep,* or *peet-weet,* a sound often heard in the gathering dusk from lake or sea. At close range the spots on the under parts of the adult can be readily made out, but at a distance they hardly show, and in the young bird they are absent. The *white along the wing,* however, is conspicuous in flight, and helps to distinguish the Spotted from the Solitary Sandpiper. The difference in the tail-feathers is described under the Solitary Sandpiper (see p. 264.)

Bartramian Sandpiper; Upland Plover. *Bartramia longicauda*

11.50. Bill 1.15

Ad. — Upper parts a mixture of black and buffy-brown; outer tail-feathers barred with white, black, and reddish-brown; tail reaching considerably beyond the tips of the wings; breast and sides buffy, streaked with black; belly white.

Nest, a depression in the ground. *Eggs,* buff, or buffy-white, speckled with dark brown or purplish, chiefly around the larger end.

The Upland Plover occurs as a migrant on the grassy hills along the sea-shore in May, and again in August and

early September. It breeds on grassy hillsides or fields, chiefly in the uplands of New England, though not now so commonly as formerly. A few breed on Long Island, on Martha's Vineyard and Nantucket, and in Worcester, Berkshire, and Barnstable counties, Mass.; in southern Vermont and New Hampshire it is generally distributed, though nowhere common.

As one goes through a mowing-field, a large bird springs up with a rolling whistle, and flies anxiously about on long curved wings, finally alighting on some heap of stones or some other point of observation; just after alighting it stretches both wings to their utmost up over its back. At night its long mournful song is heard overhead or from the moonlit fields. The *long neck* and rather long bill, the general sandpiper appearance, will serve to identify it easily in its grassy summer home, where no other similar bird will be met. On the shore it can be told by its size, its rolling whistle, its lack of marked white, and its preference for grassy hillsides.

Willet. *Symphemia semipalmata*

15.00. Bill 2.15

Ad. in summer. — Upper parts brownish-gray; lower parts white; fore neck and upper breast streaked with dusky, the sides barred with buff; *wing blackish*, showing when spread *a conspicuous patch of white;* basal half of the tail white. *Ad. in winter.* — Upper parts ash-gray; under parts white; wing as in summer. *Im.* — Upper parts brownish-gray, tinged with buff; sides tinged with buff, finely mottled with gray; wings as in adult.

The Willet is a rare migrant along the sea-coast in August and early September. Along the Sound stragglers are sometimes seen in May, and very rarely in summer. The great contrast of black and white in the outstretched wing readily distinguishes the Willet. The much commoner Black-bellied Plover also shows white in the wings and at the base of

the tail, but should be distinguished by its shorter legs and much shorter bill. (See Fig. 77.)

Solitary Sandpiper. *Helodromas solitarius*

8.40. Bill 1.15

Ad. in spring. — Upper parts olive-brown, sparsely speckled with white; front of neck streaked with dusky; outer *tail-feathers white, barred with black;* wing not showing a row of white spots in flight. *Ad. in fall.* — Upper parts dark ashy, even less speckled with white; front of neck less streaked with dusky. *Im.* — Upper parts brownish-gray, everywhere speckled with white; sides of head and neck dusky; rest of under parts white; tail as in adult; legs greenish.

The Solitary Sandpiper is a not uncommon migrant throughout New York and New England, passing north in May, and returning in late July, August, and September. It is the only sandpiper except the Spotted, which occurs regularly away from the sea-coast or from extensive bodies of water. In fact, it may be found as a migrant near any ditch or pool of stagnant water, and seems to prefer a muddy shore to the pebbly beaches which the Spotted Sandpiper haunts.

Fig. 78. Tail of Solitary Sandpiper

Its notes are almost identical with those of the Spotted Sandpiper. It sometimes occurs in sloughs on the marshes, and might there be confused with the Summer Yellow-legs. Its tail, however, distinguishes it both from the Yellow-legs and from the Spotted Sandpiper. The central pair of feathers are dark, but the outer ones are white, barred with black; it therefore shows much more white in the outspread tail as it flies up than the Spotted Sandpiper, but less than the Yellow-legs. Moreover, it lacks the line of white in the wing which is so characteristic of the Spotted

Sandpiper, and its flight is generally higher and wilder. (See Spotted Sandpiper, p. 262.) Like the Yellow-legs, it constantly nods its head and neck.

YELLOW-LEGS; SUMMER YELLOW-LEGS. *Totanus flavipes*

10.75. Bill 1.40

Closely resembles the following species.

The Summer Yellow-legs is a rather common fall migrant off the coast of New York and New England; it is very rare in spring. It resembles its larger relative, the Winter Yellow-legs, very closely, both in appearance and habits, but differs slightly in its notes. (See the following species.)

GREATER YELLOW-LEGS; WINTER YELLOW-LEGS. *Totanus melanoleucus*

14.00. Bill 2.20

Ad. in spring. — **Upper parts blackish and pale gray, speckled with white; *basal half of the tail white.* Under parts white, streaked in the throat with dusky, and on the breast and sides spotted and barred with gray.** *Ad. in winter* **and** *Im.* — **Similar, but without the blackish on the upper parts; under parts streaked only on the neck and upper breast; legs yellow.**

The Winter Yellow-legs is a common migrant along the coast, making the longest stay of any of our non-resident shore-birds; it is found from the middle of April through May, and from the middle of July through October. It frequents grassy marshes, but may be seen or heard on almost any muddy flat.

Its loud whistled note, *kū, kū, kū, kū,* is a familiar sound and calls our attention to its long slender form high over head. When it lights, it bobs its head frequently, like the Solitary Sandpiper and the Ring-neck. Its long slender legs and long bill are conspicuous. When it rises, its white upper tail-coverts are an excellent field-mark; the Black-

bellied Plover has the same mark, but the bird is of a very different figure, with a bill only half as long. The Summer Yellow-legs, which is here during July and September, resembles its relative very closely, and if the two are not present at the same time, might be mistaken for the larger bird. The call of the Summer Yellow-legs, however, is almost always shorter; it utters often but a single *kū*, often two (the second lower than the first), more rarely three. The Winter Yellow-legs is always a wary bird, much less tame than the Summer Yellow-legs.

Sanderling. *Calidris arenaria*

8.00. Bill 1.00

Ad. in spring. — Upper parts grayish-white, each feather spotted with black, and edged with chestnut; rump dark brown; tail grayish-brown; sides of head, throat, neck, breast washed with rusty brown, and spotted with black; rest of under parts white; *wings when spread show a line of white. Ad. in late summer and fall.* — Upper parts pale gray, the centre of each feather black; under parts pure white. *Im.* — Upper parts gray, spotted with black and white; hind neck dusky white; throat and breast washed with buff; rest of under parts white; wings as in *ad.*

The Sanderling is a very common migrant along the coast in spring and fall; it winters very sparingly on Cape Cod and on Muskeget Island. It passes north in the latter part of May, and returns from July to the end of October. It is strictly a bird of the outer sandy beaches. A flock of Sanderlings will often form a long line at the edge of the water and follow the receding surf, probing the ground with feverish haste, and all running back at the last moment; one or two are sometimes caught by the wave and forced to fly.

The Sanderling's note is a sharp *chit*. The gunners' name, "Whitey," well describes the Sanderling, especially in late summer and fall, when no trace of the rusty brown remains. The *whitish look* about the *head* and the *black*

bill, the size, larger than the little Semipalmated Sandpiper, so often associated with it, serve to identify it when at rest. When flying, the line of conspicuous white spots in the wing, like the Spotted Sandpiper's, is an excellent field-mark.

Semipalmated Sandpiper. *Ereunetes pusillus*

6.30. Bill .65–.80

Ad. in spring. — Under parts brownish-gray, mixed with black; breast spotted with black; rest of lower parts white; legs black. *Ad. in fall.*— Upper parts plain grayish; breast unspotted. *Im.* — Upper parts gray, mixed with black and a little reddish-brown; under parts white, a dusky wash across the breast.

The Semipalmated Sandpiper is a common migrant along the sea-coast in May, July, August, and September. It not infrequently occurs on the shores of inland lakes, and is an abundant fall migrant in the Hudson Valley. Gunners call this species and the Least Sandpiper, with which it often associates, "Peep."

The Least prefer the sloughs or muddy pools in the marshes; the Semipalmated frequent the beaches, but both species may occur in either place. Both species associate with Sanderling on the beach, and with White-rumped Sandpipers and Ring-necks both on the beach and in the marsh. When with Ring-necks, the difference in behavior is amusing: the Ring-necks scatter about and stand in thoughtful attitudes; the Peep feed with nervous haste, head down, and bill in the sand.

When startled, the Semipalmated Sandpipers utter a little rough *peep*, and fly in compact bands further up the beach; they have also a very pretty whinnying note, and in May occasionally utter the love-song, a series of sweet notes delivered in the air. When the Least and Semipalmated Sandpipers occur side by side, it is evident that the former has more chestnut-brown in the back, and a darker wash on

the sides of the neck, but it is almost impossible to distinguish the two without shooting them, unless one can get near enough to see the color of the legs. Dr. C. W. Townsend has called my attention to the fact that the legs of the Least Sandpiper are greenish-yellow, while the Semipalmated Sandpiper has black legs.

Red-backed Sandpiper; Dunlin. *Pelidna alpina sakhalina*

8.00. Bill 1.50

Ad. in spring. — Back and wings tinged with considerable reddish-brown; head, neck, and breast light gray; belly black; *bill slightly curved. Ad. in fall.* — Upper parts ashy-gray; lower parts white; neck and upper breast tinged with gray; bill slightly curved. *Im.* — Back blackish, the feathers bordered with rusty; head and neck dull buff, streaked with dusky; breast buffy-white, streaked with black; belly white, spotted with black; bill as in *ad.*

The Dunlin is a rare spring and not uncommon autumn migrant along the coast, occurring in May, and from the

Fig. 79. Red-backed Sandpiper

middle of September to December. It feeds on the outer sand-beaches and mud-flats, either alone or in company with Sanderling and plover. Its note may be written *peurr.*

Specimens showing the red backs and black belly are not often seen, but the fall birds may be distinguished by the plain ashy tone of the upper parts, and especially by the bill, which has *a slight but distinct downward curve.*

LEAST SANDPIPER. *Actodromas minutilla*

6.00. Bill .75

Ad. — Feathers of the head and back black, edged with gray or chestnut; sides of head, neck, and breast streaked with brown; belly white; legs greenish-yellow. *Im.* — Upper parts much as in adult; breast dusky, very indistinctly streaked with darker; rest of under parts white.

The Least Sandpiper is a common migrant along the coast in May, and again in July, August, and early September. Like the other common sandpipers, it occasionally occurs on inland ponds and rivers, and it is tolerably common in the Hudson Valley in May. This species and the Semipalmated Sandpiper are the first to return from the north, reaching Massachusetts early in July. By the end of August it has nearly completed its migration, though the Semipalmated Sandpiper is found throughout September. For an account of the habits of the two, see p. 267.

WHITE-RUMPED SANDPIPER. *Actodromas fuscicollis*

7.50

Ad. — Upper parts brownish-gray, the feathers spotted with black in spring; *base of tail pure white;* under parts white; sides of head, neck, and breast streaked, especially in spring, with dusky. *Im.* — Similar, but feathers of back tipped with white, and edged with reddish-brown; breast grayish.

The White-rumped Sandpiper is a not uncommon migrant along the coast in May, and from the middle of July to the middle of October. It frequents the sandy beaches, marshy pools, and the mud-flats, consorting with the other "Peep,"

from which its greater size and the *pure white base* of the *tail* readily distinguish it.

Pectoral Sandpiper; Grass Bird. *Actodromas maculata*

9.00. Bill 1.15

Ad. in spring. — Upper parts gray tinged with rusty and speckled with brownish-black; rump and base of tail brownish-black, tipped with reddish-buff; central tail-feathers dark, outer ones lighter; sides of neck, and breast pale buff, streaked with dusky; rest of under parts white. *Ad. in fall.* — Similar, but the rusty tinge on the upper parts wanting. *Im.* — Feathers of upper back tipped with white; breast more buffy.

The Pectoral Sandpiper, the Grass Bird or Krieker of the sportsmen, is a migrant in spring and fall, generally not uncommon, and occasionally abundant. It passes north in April and May, and returns from the end of July to October. It is strictly a bird of the grassy marshes, rarely appearing on the mud-flats or sand-bars. After a flock lights, the birds generally scatter over the marsh, and when approached crouch on the ground like snipe, till one is almost on them. When they fly, they utter a sharp *krick-krick*. The male is considerably larger than the female; both look like a large edition of the Least Sandpiper.

Purple Sandpiper. *Arquatella maritima*

9.00. Bill 1.40

Ad. in winter. — Upper parts dark gray, with a bluish gloss in strong light; throat and breast dark gray; belly and under sides of the wings white; sides streaked with dark gray.

The Purple Sandpiper, or Winter Snipe of the gunners, occurs as a winter visitant to the rocky shores of New England and of Long Island, arriving in September and leaving in February or March. It finds its food on rocky ledges exposed by the falling tide, and occurs most frequently on

small outlying rocky islets, such as Gull Rocks at Cohasset, Mass., and Cormorant Rock, south of Rhode Island. It is generally found in small flocks, which permit a very near approach. Its note is a whistling twitter. The fact that no other sandpiper occurs in such localities in winter makes it very easy to identify, even if its *grayish color*, *short legs*, and *squat figure* did not distinguish it.

KNOT. *Tringa canutus*

10.50. Bill 1.30

Ad. in spring. — Upper parts gray, spotted with black and reddish-brown; rump and base of tail lighter; sides of head and under parts bay. *Ad. in fall.* — Upper parts bluish-gray; rump and *base of tail white, barred with black;* under parts bay, blotched with white. *Im.* — Upper parts as in fall adult; under parts white, without any bay; throat and breast streaked with dusky.

The Knot is a common migrant along the coast in May, and again in July, August, and September. It frequents mud-flats and sand-bars, but is also commonly found on the outer beaches. It is either stupid or else very unsuspicious, and allows a near approach. Old birds are easily recognized by their bay breasts; they may be readily distinguished from adult Dowitchers, which also have reddish-brown breasts, by the light color of their upper parts and by their much shorter bill. Young birds have light under parts, and must be recognized by the general light gray tone of the upper parts and the *still whiter tail*. Their note has been described as like the soft *whit whit* that one uses in whistling a dog back.

STILT SANDPIPER. *Micropalama himantopus*

8.25. Bill 1.55

Ad. in fall and winter. — Upper parts brownish-gray; line over eye and under parts white; neck and breast streaked with gray; tail white; *legs yellowish-green*. *Im.* — Similar, but upper parts blackish, the feathers bordered with buff.

The Stilt Sandpiper is a migrant along the coast, very rare in New England in spring, and generally rare in the autumn, but commoner on Long Island. It generally occurs late in July, in August, or early in September. It frequents both beach and marsh. It is commonly associated with the Summer Yellow-legs, which it resembles in appearance and behavior; it may be distinguished by the greater contrast of its small size with its length of leg, and at close range by *its yellowish-green* legs.

Dowitcher. *Macrorhamphus griseus*

10.50. Bill 2.25

Ad. in spring. — Upper parts mixed black and buffy; rump aud tail white, spotted with black; sides of head and under parts pinkish-brown, finely spotted with black. *Ad. in fall.* — Head and back pale slate-gray; wings dark gray, spotted with whitish; throat and breast brownish-gray; belly white; *rump and tail white, barred with black. Im.* — Upper parts black, mixed with reddish-brown; rump and tail as in adult; under parts washed with buff and indistinctly speckled with dusky.

The Dowitcher is a rather common migrant along the coast in May, and again in July, August, and early September. It frequents mud-flats and sand-bars, is very tame, and generally occurs in close flocks. It may be known by its *long bill*, dark back, and *silvery gray lower back, rump, and tail.* Old birds in May and July have pale reddish breasts, but the young birds in August and September have light under parts.

Wilson's Snipe. *Gallinago delicata*

11.25. Bill 2.50

Ad. — Middle of crown black, divided by a buffy line, and separated by two narrow buffy stripes from two brown lines running from the bill to the eyes; back and wings a mixture of black, reddish-brown, and white; *tail reddish-brown, barred with black;* throat gray; breast brown, streaked with black; sides gray, barred with black; belly white.

The Snipe is a rather common migrant through New York and New England in late March, April, September, and October. It winters sparingly in springy places in southern New England and the lower Hudson Valley, and breeds in northeastern Maine. The Snipe is found in fresh water marshes and wet meadows; it lies concealed in the shelter of a tuft of grass, trusting to its coloration for protection, until one is almost upon it, when it rises with a harsh *scaipe,* and goes twisting off.

In the spring, and occasionally in the fall, the Snipe rises at dusk over the marshes and utters a muffled sound, which has been termed bleating, but has a distinct suggestion of air winnowed by feathers. The Snipe may occasionally be seen on cloudy afternoons in spring, flying back and forth, rising and falling in great curves, uttering this sound, which appears to come at the end of each descent. Its *long bill* and the *black, white, and reddish-brown* of its *tail* serve to distinguish it readily from any other bird of the open meadow.

Woodcock. *Philohela minor*

11.00. Bill 2.90

Ad. — Back of head black, barred with rusty yellow; rest of upper parts grayish-brown, mixed with black; dark line from the eye to the bill; under parts buffy, tinged especially on the *flanks* with *cinnamon; tail black, tipped with white;* eye large.

Nest, on the ground. *Eggs,* buffy, spotted with reddish-brown and purplish-gray.

The Woodcock is a summer resident of New York and New England, formerly common, but now becoming rare. It arrives early in March, and stays till November. It feeds in low swampy woodland, where it bores for worms in the soft mud. In the fall it is often flushed from rather dry woodland. When it rises, it almost always makes a whistling sound, presumably with its wings.

In March and April the males execute their interesting flight-song. From the low ground near some rocky pasture, as dusk approaches, a harsh *peent* is heard, like a Night-hawk's cry. This is repeated a number of times, and then from the sky overhead there issues a series of whistling sounds, interspersed with liquid notes like the syllables *whit, whit, whit.* Then the *peents* begin again from the ground. If an observer conceals himself near the open space where the harsh *peent* is now heard, he will see the bird come shooting down at the end of the flight and will see it on the ground, facing now in one direction, and now in another, as it utters the *peents.* If near enough, he will also hear a curious *p' tul,* sometimes repeated several times in the intervals between the harsh cries. The bird rises a number of times, repeating the performance till it grows quite dark; then all is silent. If the same spot is visited before dawn, the performance may be witnessed to still greater advantage, as it will grow steadily lighter instead of darker.

When a woodcock is flushed in the daytime, the long bill and the short black tail are excellent field-marks. The snipe is the only bird likely to be mistaken for it, but the woodcock is nearly always found in the cover of tree or bushes, while the snipe lies in open marshy ground or meadows.

PHALAROPES: FAMILY PHALAROPODIDÆ

Two Phalaropes occur off the coast of New York and New England. Sometimes they are blown inland in large flocks, but they are generally found many miles from land, feeding on floating sea-weed or swimming lightly on the ocean, but rising and flying off like sandpipers, when disturbed by the approach of a vessel. The female Phalarope is larger and more brightly colored than the male; she is said to do the courting, and to leave the task of incubation to the male.

Northern Phalarope. *Phalaropus lobatus*

7.75. Bill .85

Ad. ♀ *in summer.* — Top and sides of head and upper back bluish-gray; sides of neck rich rusty brown; wings dark, with a bar of white; throat white; breast bluish-gray, tinged with rich rusty brown; belly white. *Ad.* ♂ *in summer.* — Similar, but duller; upper parts blackish-brown, streaked with buff. *Ad.* ♀ and ♂ *in winter.* — Forehead, stripe over eye, and under parts white; top of head, back, and wings grayish. *Im.* — Similar, but upper parts blacker; breast washed with brownish.

The Northern Phalarope is a regular migrant along the sea-coast in May, August, and September, but occurs generally so far out at sea that it is rarely observed from the shore. It is only when blown out of its course by storms that it is seen in the outer bays and harbors, or off the beaches. Occasionally it is found some distance inland, particularly on the lakes of Maine. Large flocks of Phalaropes are often observed from vessels crossing to the Maritime Provinces or from trans-Atlantic liners. The birds ride easily or gracefully on the water, or when disturbed rise and fly off in a compact body, their long wings and manner of flight reminding one at once of their relationship to the sandpipers. They are called "Sea-geese" by the fishermen, from their habit of stretching out their long necks when alarmed.

To distinguish the Northern Phalarope from the following species, when not in the breeding plumage, is difficult, especially at sea, where absolute size counts for so little. The Red Phalarope shows more black on the top of the head and in the wings, and is much less frequently seen near the shore.

Red Phalarope. *Crymophilus fulicarius*

8.12. Bill .87.

Ad. ♀ *in breeding plumage.* — Top of head black; patch about eye white; back streaked with black and yellowish-brown; wings black and white; throat bluish-slate; rest of under parts deep pinkish-cinnamon; rump tinged with same. *Ad.* ♂ *in breeding*

plumage. — Resembles the ♀, but duller; the black on the crown marked with yellowish-brown. *Ad.* ♀ and ♂ *in winter.* — Forehead white; crown black, streaked with white; hind neck grayish-brown; middle of back dark gray; wings black and white; under parts white. *Im.* — Similar, but with more black and yellowish-brown on the back.

The Red Phalarope occurs, like the preceding species, as a spring and fall migrant, far out at sea, and is only rarely blown in by severe storms. In breeding plumage it is easily recognized, but in the fall it is hard to distinguish it from the preceding species except by its greater size.

RAILS, ETC.: ORDER PALUDICOLÆ

RAILS, GALLINULES, AND COOTS: FAMILY RALLIDÆ

Two species of Rail breed throughout New York and New England, in extensive swamps of grass or cat-tails. They are largely nocturnal in their habits, and, though very noisy, they are rarely seen. The Florida Gallinule is a rare summer resident of southern New York and New England in the reed-grown margins of shallow ponds; it is diurnal, and either walks or swims. The Coot is a migrant, chiefly in the autumn; its general appearance is that of a duck. For a full account of the notes of the two Rails, see Mr. Brewster's "Voices of a New England Marsh," "Bird-Lore," vol. iv. p. 43.

American Coot. *Fulica americana*

15.00

Ad. — Head and neck blackish; body, wings, and tail slate-gray, paler below; wing when spread shows a little white; *bill whitish*, tipped with brown. *Im.* — Similar, but much whiter below. Bill dull flesh-color.

The name Coot is applied at the sea-shore to the Scoters, a genus of sea-ducks, but the bird known as Coot on small

inland waters, though in general resembling a duck, is a relative of the rails and gallinules, with lobed and not webbed feet. It is a migrant through New York and New England, rare in New England in April, but fairly common from late September to November. In the Hudson Valley it is said to be common from the end of April to the middle of May. It frequents the swampy borders of lakes or sluggish streams, where it seeks the shelter of bushes and reeds. When several Coot are together, they often play on the water, and frequently run along the surface, making a loud splattering noise. A bird often stands up full length out of the water, shows its ungainly form, and then sinks forward into the water. In feeding, a Coot dives readily, and pulls up the aquatic plants from the shallow bottom. It swims freely but generally with a backward and forward motion of the head, which distinguishes it from a duck. Langille, who studied the Coot on its breeding ground, describes it as "decidedly a noisy bird, its *coo-coo-coo-coo* being heard both day and night." It also has a *squack* similar to the quack of a duck. As a migrant, however, it is generally silent. The *white bill* is the best field-mark, and is particularly noticeable when the bird faces the observer.

Florida Gallinule. *Gallinula galeata*

13.50

Ad. — Head and neck blackish; rest of body slate-gray, washed on the back with brown and on the belly with white; under tail-coverts white; *bill and forehead bright red*, the former tipped with greenish-yellow. *Im.* — Similar, but under parts suffused with white; bill and forehead brownish.

Nest, of cat-tail flags, floating on the water or on a bed of flags. *Eggs*, buff or buffy-brown, sparsely spotted with brown.

The Florida Gallinule is a rare summer resident of southern New England and the Hudson Valley, arriving in May,

and staying till October. It inhabits the reed-bordered shores of lakes or ponds, either swimming like a duck or walking in the shallows like a rail. Its notes are very hen-like. It may be known by its *red, yellow-tipped bill* and a *plate* of *bright red* on the front of its head. Its tail is constantly cocked, and shows a patch of white beneath it. (See Brewster, "Auk," vol. viii. pp. 1–7, for a full account of the habits and notes of the Florida Gallinule.)

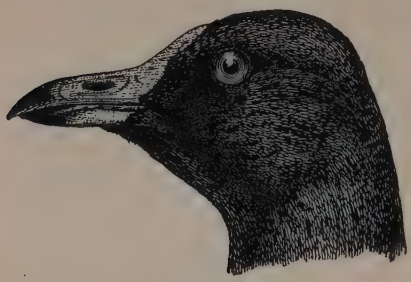


Fig. 80. Florida Gallinule

Sora; Carolina Rail. *Porzana carolina*

8.50. Bill .80

Ad. — Top of head brown, a blackish stripe through the centre; back, wings, and tail brown, streaked with black and a little white; sides of head, line over eye, and breast ash-gray; forehead, region about the base of the bill, middle of throat, and breast black; belly white; *bill short, yellow.* *Im.* — Upper parts dark brown, mixed on the back with black and a little white; throat white; breast washed with buff; sides dark, barred with white; belly white.

Nest, a platform of grass or sedge in a tuft of grass or sedge. *Eggs*, brownish-buff, sparsely spotted with brown and purplish-gray.

The Carolina Rail is a common summer resident of most of New York and New England, though rather rare in the vicinity of New York city. It arrives in April, and leaves in October. Though common in suitable localities, it is only found where there are extensive marshes, cat-tail swamps, or meadows which retain much water all through

the summer. Here it may be constantly heard and occasionally seen, picking its way along the edge of the marsh or between the tussocks of sedge, or, when startled, flying a short distance with weak flight and dangling legs, and then dropping into the grass. It walks with a constant upright tilt of its short tail, thus exposing the buffy under tail-coverts.

The notes of the Carolina Rail, heard most commonly at the approach of dusk and all through the evening, and also at intervals through the day, are a long frog-like cry, resembling the syllable *kur-wee'*, and a whinny. The birds utter also, when startled, a cry like the syllable *kuk;* a stone thrown into the cat-tails in late summer or fall is almost sure to provoke this cry. Its *short yellow bill* shows conspicuously against the black about its base, and distinguishes it from the Virginia Rail, which has a long dark bill.

FIG. 81. Sora

VIRGINIA RAIL. *Rallus virginianus*

9.50. Bill 1.50

Ad. — Top of head and back rich brown, streaked with black; sides of head ash-gray; line from bill to eye white, above a blackish stripe; part of the *wings rich reddish-brown; under parts a warm brown;* lower belly black, barred with white; *bill long, slightly curved. Im.* — Upper parts much as in adult; throat and line down the middle of the lower parts whitish; rest of under parts blackish.

Nest, a platform of grass or sedge in a tuft of grass or sedge. *Eggs*, pale buffy-white, spotted and speckled with reddish-brown.

The Virginia Rail is a summer resident of New York and New England, common in the southern and central portions of the region. It arrives in April, and stays till Octo-

ber; it winters sparingly from Cape Cod southward. It inhabits fresh water marshes and wet meadows, particularly where cat-tails abound, and is often associated with the Carolina Rail, many of whose habits it shares. When seen, the long bill and the rich, reddish-brown of its wings and under parts distinguish it from its relative. Its notes, too, are quite distinct. They consist of a low monotonous call, like the syllables *cut'-ta, cut'-ta*, and a series of more startling notes, *wak, wak, wak*, each note lower than the preceding, like the grunting of little pigs. In summer, when the old bird is followed by the young, she utters, when alarmed, a note like the syllable *kip*.

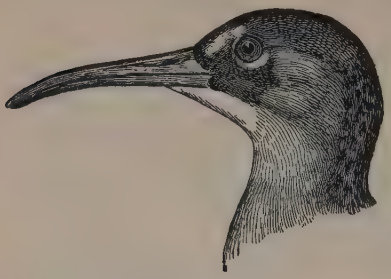


FIG. 82. Virginia Rail

HERONS, ETC.: ORDER HERODIONES

HERONS AND BITTERNS: FAMILY ARDEIDÆ

Three species of Heron and two of Bittern occur in New York and New England. The American Bittern and the Green Heron breed everywhere in suitable localities; the Least Bittern is not uncommon in parts of southern New York and New England; the Night Heron is common along the sea-coast; the Great Blue Heron breeds in the wilder portions of northern New York and New England and occurs farther south as a migrant. The two species of Bittern live in extensive swampy meadows or cat-tail swamps, and depend on their coloration for protection; if startled, they fly to some other part of the grass or flags. The herons stand on the margins of shallow coves and pools, flying

often to trees when startled. When flying they extend their legs behind them, but instead of stretching out their necks as ducks do, they shorten them by taking in a "tuck." The Night Heron feeds largely after dusk.

BLACK-CROWNED NIGHT HERON. *Nycticorax nycticorax nævius*

24.00

Ad. — Crown and back black; wings and tail gray; forehead and under parts white. *Im.* — Upper parts, wings, and tail brown, streaked and dotted with white; under parts lighter, streaked with brown and white.

Nest, in trees. *Eggs*, pale bluish-green.

The Night Heron is a summer resident of New York and New England, common along the coast, but rare or absent in the interior; it occasionally winters in southern New England. It breeds in communities which occasionally number many hundred individuals. It feeds chiefly in shallow, tidal creeks; even if it breeds at some distance inland, it often flies at dusk to the salt marshes or to the beach. Its hoarse *quok*, almost like the bark of a dog, is therefore a very familiar sound along the coast. In the daytime it roosts in trees; in late summer flocks gather which sometimes reach into the hundreds. Though it feeds chiefly after dusk, yet it is occasionally seen in the daytime, either standing at the edge of small marshy pools or along the shore, or flapping heavily over the marshes.

Adults are easily identified by their *white under parts*, ash-gray wings and tail, and the *black crown* and upper back. The immature birds are brown, spotted with white or buffy. When seen flying at a distance it is difficult to identify them with certainty, until one becomes familiar with the characteristics of their flight, which is slow and heavy; the strokes are alternated with periods of sailing, during which the wings are curved slightly downward.

Green Heron. *Butorides virescens*
17.00

Ad. — Top of head glossy greenish-black ; *wings, back, and tail greenish ;* the longer wing-feathers with a bluish tinge; sides of throat and neck chestnut ; a narrow strip of black and white down the middle of the neck ; under parts brownish-gray. *Im.* — Similar, but under parts white, streaked with brown.

Nest, of twigs, in trees. *Eggs,* pale green.

The Green Heron is a common summer resident of New York and New England, arriving late in April or early in May, and staying till October. It feeds in the marshy coves of rivers or ponds, or at the edges of swamps. When startled it rises with a harsh *quak,* and after the legs have been picked up, and a tuck taken in the long neck, the broad wings take the bird off over the tree-tops or around a protecting bend of the shore. When in the air, it looks about the size of a crow, but flies with slower, heavier strokes and shows a shorter tail. When the bird lights, it is very apt to raise its head-feathers somewhat, giving its head a peculiar bushy appearance. Inland and south of Vermont and New Hampshire it is, in the summer, almost the only heron to be seen. As the train runs along a shallow river, like the Connecticut, individuals may be observed almost every mile, flying or standing.

The *greenish or bluish-green color of the wings* and its smaller size should distinguish it from the Night Heron. The green shows only as an iridescent color on the wings ; the quill-feathers, and in old birds the back also, are bluish, so that many an amateur catching this color has jumped to the conclusion that he has seen the Little Blue Heron of the South. There is no danger of confusing the Green Heron with the Great Blue Heron, a bird that seems to the excited eye as tall as a man and as broad-winged as an eagle. The Bittern, the only other heron-like bird to be kept in mind, stiffens, when standing, into a vertical posi-

tion, the bill pointing almost directly upward, and the black and ochre stripes showing clearly on the neck. The Bittern on the wing looks brown, and is much larger than a crow. (See, also, under Least Bittern, p. 285.)

Great Blue Heron. *Ardea herodias*

42.00 – 50.00. Bill 4.30 – 6.25

Ad. — Crown black, *divided by a broad white stripe;* throat white; neck brown; back and tail gray; wings gray, *broadly edged with black;* breast and belly streaked with black and white. *Im.* — Top of head dusky; back browner.

Nest, in trees. *Eggs,* bluish-green.

The Great Blue Heron used to breed throughout New England, but it is now doubtful if there are any of its heronries left in southern New England. It is still a summer resident of the wilder portions of northern New York and New England, and a not uncommon migrant in April and May, and from the end of July till November. It is found at the edges of lakes and ponds, or on the broader reaches of rivers, and still more frequently in the salt marshes and on the sandy or rocky ocean beaches. When the bird is standing, its long legs and neck are very conspicuous, and its body seems ridiculously thin. It is ordinarily silent on migration, only occasionally uttering a hoarse *quak;* in summer two birds sometimes quarrel, uttering loud, harsh squawks.

It is always an extremely watchful bird, and long before an observer approaches near it rises and flaps slowly off. After it gets under way, it shortens its long neck so that there is a perceptible tuck in it, and stretches out its legs behind. It now settles into a flight which, though apparently heavy, takes the bird along with great ease and speed; the strokes are often alternated with periods of sailing. It frequently settles in the top of some tree at a safe distance. Its wing-spread is as great as a Fish Hawk's,

but not so great as an eagle's. The under sides of the wings have a distinct blue shade, but as a rule the wings look *gray*, with *black borders* and tips.

Least Bittern. *Ardetta exilis*

13.00

Ad. ♂. — Top of head, back, and tail glossy black; sides of neck yellowish-brown, deepening on back of neck into rich rusty-brown; patch on wing buffy, edged with rich rusty-brown; under parts *white*, tinged with buffy, *unstreaked*, a blackish patch at either side of breast. *Ad.* ♀. — Similar to male, but with the black replaced by brown; under parts darker, streaked with brownish. *Im.* ♂. — Similar to *ad.* ♂, but under parts lightly streaked with black.

Nest, a platform of reeds, fastened to upright reeds. *Eggs*, white, or greenish-white.

The Least Bittern is a rather common summer resident of southern New England; it is rare north of Massachusetts,

Fig. 83. Least Bittern

and occurs in northern New England only in the river valleys. It arrives in May and leaves in August. It is an inhabitant of cat-tail swamps, either along the sea-shore or inland, and of the grassy swamps along sluggish streams. It is very secretive, often escaping observation by stiffening

in an upright position among the reeds, or by slipping off quietly as one approaches. Occasionally, when driven to it, it flutters off, with a low note, and drops into the flags near by. In spring the male utters a low *coo coo coo*, that suggests the note of the Mourning Dove.

If the bird is seen in the reeds, it may be known for a bittern by its long, sharp, light-colored bill and its stout feet, which grasp the stalks of the cat-tails. Its small size and the *buff and chestnut* patches on the *wings* will distinguish it from any other heron or bittern. Even the Green Heron will look large in comparison with this diminutive representative of the family; the whole wing of the Green Heron, moreover, looks dark, almost black.

American Bittern. *Botaurus lentiginosus*

28.00

Ad. — Top of head rich chestnut-brown; back dark brown, streaked with buff; wings yellowish-brown, deeply tipped with black; sides of neck glossy black; under parts buffy, streaked with brown; bill yellow.

Nest, flat, of reed-stalks, on the ground, in marshes. *Eggs*, drab.

The Bittern is a summer resident throughout New York and New England, arriving in April, and leaving in September or October. It is rare in summer in the lower Hudson Valley and along Long Island Sound, but is not uncommon as a migrant. It breeds in extensive marshes, both fresh and salt, and on wet meadows along sluggish streams, but as a migrant it may occur in almost any small swamp or along the banks of small streams. It is a sluggish bird, and when any one approaches, stands erect with head pointing upward; in this position it harmonizes so well with the brown grass or cat-tails around it that it is very difficult to discover. When one is almost upon it, it springs up awkwardly, often with a hoarse cry, and then flaps off with slow strokes of its broad wings.

In April and May, in the early morning, late afternoon, and evening, the Bittern "pumps." Standing in the grass, it utters at intervals a series of two or three notes, of a curious guttural character, resembling the syllables *plum-puddn'* or *unk'-a-chunk'*, either wooden or liquid, according to the nature of the country between the listener and the bird. The notes sound either like the blows of a mallet on a stake, or like the gurgling of a pump. The Bittern may be cautiously approached when making these sounds; one can then see the curious movements with which he evidently gulps in air, and hear the click of his bill, which he opens and shuts rapidly before he begins the final delivery of the notes. (See Torrey, "Auk," vol. vi. p. 1.)

If seen in its erect position, the streaks of *buff and black* on the *neck*, and the long yellow bill distinguish it. If not startled, it hunches its back, and with bill pointing downward steals off with slow, cautious steps. When flying, the expanse of *brown wings, tipped with black*, identifies it. Immature Night Herons in the brown plumage have been mistaken for Bitterns; but the Bittern, so far as I know, never lights in trees, whereas the Night Heron regularly does so.

DUCKS, GEESE, SWANS: ORDER ANSERES

DUCKS, GEESE, SWANS: FAMILY ANATIDÆ

Geese: Subfamily Anserinæ

Two species of Goose occur in New York and New England: one is the well-known Canada or Wild Goose, often heard honking overhead, occasionally seen in inland ponds or along the sea-coast; the other, the Brant, occurs as a migrant along the coast.

Brant. *Branta bernicla*

26.00

Ad. — **Head, neck, and *upper breast black;* streaks of white on the sides of the neck; back and wings brown; belly whitish; tail black, base white.**

The Brant is a migrant along the coast in March and April, and in October and November. It keeps well out along the shore, and is found in numbers only at certain points, such as Monomoy on Cape Cod, and on Nantucket and Martha's Vineyard. Here the Brant sometimes occur in great flocks, which rest in long lines on the sand-bars, or feed at the edge of the flats, tearing up eel-grass by the roots. They may be known from the Canada Goose by the smaller size, by the absence of white on the throat, and by the *black breast.*

Canada Goose. *Branta canadensis*

35.00 – 43.00

Ad. — ***Head and neck black;*** **broad bib of *white* from sides of head *across throat;* back and wings brown; under parts whitish; tail black, base white.**

The Wild Goose is more often heard than seen, excepting perhaps on the sea-shore. The *honking* of migrant flocks was once a common sound in March and April, and again from the first of October to the end of December. At favorable points along the coast, and in certain inland ponds, flocks often alight to rest. They then ride on the water, or stand on exposed bars, or feed by pulling up vegetation in the shallow water. When seen at close range, they are easily identified by the *black head and neck,* and the *bib of white* across the throat; when flying, they usually form a wedge-shaped flock, two lines converging at a leader. The wing-strokes are then rather slow, compared with those of a duck.

Bay and Sea Ducks: Sub-family Fuligulinæ

Ducks are divided into three subfamilies: Bay and Sea Ducks, River and Pond Ducks, and Mergansers. In all, twelve or thirteen species belonging to the first division may be found along the coast of New England and New York, but only six or seven are common. Two species, the Ruddy Duck and the Lesser Scaup Duck, are as a rule only migrants, and occur nearly as often on inland waters as at sea; the other species are all winter visitants, either along the whole coast or on certain portions of it.

The American Eider, common off the Maine and Massachusetts coasts, is rare off Long Island. The Harlequin is found regularly only on the eastern half of the Maine coast; the King Eider and Barrow's Golden-eye are rare even on the Maine coast and only stragglers farther south. The Buffle-head is by no means abundant, but the Old-squaw, the Whistler, and the three Scoters are common all along the coast and in places abundant. The Greater Scaup is locally common in winter. The American Eider also breeds sparingly along the eastern half of the Maine coast, and the Whistler breeds on some of the large lakes of Maine.

All the species named above dive for their food, and may by this habit be distinguished from the River and Pond Ducks, p. 300, but not from the Mergansers, p. 306, nor from the Grebes or the other Diving Birds, p. 329 *et seq.*

It is at first difficult for an observer on shore to distinguish the different species feeding some distance off in the water, or flying back and forth to their feeding ground. The Red-breasted Merganser and Black Duck of the following sections must also be taken into consideration in a winter visit to the sea-shore, and the presence of the Loons and Grebes adds to the complication. Much may, however, be learned by careful study with a powerful field-glass, or a small tele-

scope, especially if the observer conceal himself or approach the lookout post unobserved. One gradually becomes familiar with certain marks about the head and on the wings, the size and actions of certain species, and after long practice can distinguish them at long range and with considerable ease. The beginner, however, should be very careful, and identify with great hesitation. A morning in a "blind," or a cruise in a sailboat with a "gunner" or a more advanced student, will clear up many difficulties. Ducks, like other sea-birds, have a habit of standing up now and then in the water and flapping their wings; at such times they show any white patches there may be in the wings. When about to alight they generally scale for some distance with wings set and body almost perpendicular, and just before they drop into the water a foot dangles down on each side. At this time one can note the color of the feet and legs, which differs with the different species. "Scoters, Old Squaws, and Eiders ordinarily fly low over the water, . . . while the Mergansers, Scaups, Whistlers, and most of the others, are apt to fly high" (Job, "Among the Water-Fowl," p. 221.)

NOTE. — The term *speculum*, which occurs frequently in the descriptions of the plumages of ducks, is applied to a small patch of feathers in the wing, which in many species differs in color from the rest of the wing, and often has a beautiful metallic lustre. Many ducks have also larger or smaller areas of white in the wing which serve as better field-marks than the speculum, which is only useful in case the duck is seen at close range.

RUDDY DUCK. *Erismatura jamaicensis*

15.00

Ad. ♂ in breeding plumage. — Crown and nape black; *sides of head* and chin *white;* upper parts, throat, and fore neck bright reddish brown; upper part of breast tinged with reddish-brown; rest of under parts silvery white; tail brownish-black, the *separate feathers stiff and pointed;* no white on wing. *Ad.* ♀ and

Im. ♂. — Top of head dark brown, white stripe from below the eye to back of neck ; back grayish-brown ; under parts dull whitish. Bill short and broad.

Nest, of reeds, built up out of the water. *Eggs*, dull white.

The Ruddy Duck occurs as a migrant both on the coast and on inland waters in March and April, and in October and November. It breeds rarely in northeastern Maine, and has also been found breeding in Rhode Island and on Cape Cod. It was formerly a common migrant, but is now rapidly decreasing in numbers. It is as quick at diving as a grebe, and has the latter's power of sinking till only the bill is exposed. It may be recognized by its small size, squat appearance, and by the white or whitish sides of the head. The tail is often conspicuously cocked up, the short stiff feathers showing separately. "When rising from the water, it runs on the surface for some distance and generally against the wind . . . when on the wing, it flies low along the surface of the water, with a rapid beat of its broad wings, making a short plump figure, quite uncommon for a duck" (Langille).

Surf Scoter. *Oidemia perspicillata*

20.00

Ad. ♂. — *Patch on forehead and one on hind neck white ;* rest of plumage black; bill showing much red, orange, and yellow; feet red or reddish-orange. *Ad.* ♀. — Top of head black; spot behind eye and one in front of eye whitish; rest of plumage sooty-brown, paler below. *Im.* — Similar to ♀.

The three Scoters, or Coot, as the gunners call them (see, however, p. 276), are migrants and winter visitants along the coast of New York and New England. In winter the greatest numbers are found south of Cape Cod, where the birds gather in enormous beds in the shoal waters about Nantucket and south of Long Island. The first migrants appear in September, and the last go north in May, but

the birds are most abundant during October and April. All three species occur as more or less regular migrants on large inland ponds, — as at Dublin, N. H., — and in the valleys

Fig. 84. Surf Scoter

of the Connecticut and the Hudson, especially in the autumn. In summer a few barren birds linger along the coast, particularly in Maine.

Scoters feed over the shallows, even when the surf is breaking, diving till they reach the beds of shellfish, on which they feed. Early in the morning, or when changes in the wind or tide make them restless, they fly low over the water in large or small flocks; at other times they gather over the feeding-grounds, and dive and reappear steadily.

When on the wing, the following species, the White-winged Scoter, is readily distinguished from the other two, which show no white in the wing. Even when a flock is feeding, individuals frequently stand for a moment and shake themselves, their outspread wings at such a time often settling their identity. To distinguish the Surf Scoter from the American Scoter, it is necessary to make out the patch

of *white on the hind neck*. With a good glass this can be seen, both when the ducks are flying and when they are feeding. The female and young Surf Scoters are brown, and have only indistinct white patches on the neck, and are difficult to tell at a distance from the female or young American Scoters, which are also brown. The latter, however, are rarer than the former. The White-winged Scoter shows the white wing-patch in all plumages.

White-winged Scoter. *Oidemia deglandi*

22.00

Ad. ♂. — Spot below eye, and short, *broad patch on wing white;* rest of plumage black; bill with much red and orange; legs and feet scarlet. *Ad.* ♀. — Spot behind the eye and patch on wing white; rest of upper parts sooty-brown; under parts grayish-brown; bill orange-black; legs and feet brownish-red.

The White-winged Scoter is, perhaps, the most abundant sea duck off the coast of southern New England and Long Island. Its habits and field-marks have been described under the preceding species. Many of our sea ducks show a white wing-patch (see Whistler, p. 297, and Red-breasted Merganser, p. 308), but no others have *black breasts* as well.

American Scoter. *Oidemia americana*

19.00

Ad. ♂. — *Entire plumage black;* bill black, bright orange at the base, which is much swollen; legs and feet brownish-black. *Ad.* ♀. — Top of head dark brown; throat and fore neck grayish; rest of plumage sooty-brown, lighter below; bill black; legs and feet brown.

The American Scoter is the least common of the three Scoters; it is also the smallest. In its habits it resembles its relatives; all three are often associated on the same feeding-grounds, but generally keep in distinct flocks. The

adult male American Scoter may be distinguished from any other duck by its uniform black plumage, and its habit of diving. The Black Duck, which in winter may be found with the Scoters, does not dive; moreover, the Black Duck may generally be distinguished by the whitish under surface of its wings. An adult male American Scoter has an orange spot at the base of its black bill. (See under Surf Scoter, p. 291.)

NOTE. — The King Eider (*Somateria spectabilis*) is a rare winter visitant to the coast of New England, occasionally common off the coast of Maine. The adult male may be distinguished from the following species by the top of the head, which is a delicate lavender instead of black, and by the cheeks, which are sea-green instead of white.

AMERICAN EIDER. *Somateria dresseri*

23.00

Ad. ♂. — Top of head black, divided by a white stripe; rest of head white, tinged on the sides and back with green; neck, *upper breast*, and most of back *white;* middle of lower back, wings, tail, and *belly black;* bill, legs, and feet olive-green. *Ad.* ♀ and *Im.* — Top of head blackish; rest of plumage dark buffy-brown, lightest on throat and neck, barred everywhere with black.

Nest, on the ground, often under a bush. *Eggs*, olive-green.

The American Eider is a common winter visitant off the coast of New England, arriving in October, and returning in April. It is rare south of Massachusetts. It is a rare summer resident on some of the rocky islands of the Maine coast, from Isle au Haut eastward. Great flocks of eiders collect in the shoal water off Cape Cod, Nantucket, and Martha's Vineyard, spending the night at sea, and flying in each morning to some ledge of rocks, where they find the mussels on which they feed. These they obtain by diving through the breakers. The Eider is rarely seen in the inner bays and harbors; in fact it is known among the fishermen as the "Sea Duck."

The adult male is a very striking bird, the black crown and belly contrasting with the white breast and back. The female may be distinguished from other brown ducks by her size and the presence in the flock of black and white males. In April as the flocks fly north, the males and females alternate irregularly and fly in long lines low over the water. (See Mackay, "Auk," vol. vii. pp. 315–319.)

Harlequin Duck. *Histrionicus histrionicus*

17.00

Ad. ♂. — General color leaden blue, changing into blue-black on lower back, and bluish-gray on belly; *triangular crescent-shaped spot in front of the eye*, a round spot near the ears, a narrow collar around lower part of neck, a broad bar across breast, and other markings on wing and breast *white;* under side of neck and bar on side of breast, centre of forehead, crown, and hind neck black; sides bright reddish-brown; bill and feet slate. *Ad.* ♀. — Head and neck grayish-brown; a white spot back of the ear; sides of head tinged with white; sides grayish-brown; bill and feet slate.

The Harlequin Duck is a rare but regular winter visitant on the eastern half of the coast of Maine, frequenting rocky ledges and islets well out at sea. It may be distinguished from other ducks by "the combination of small size, dark color, and buoyancy, in air and water" (Norton, "Auk," vol. xiii. pp. 229–234). The female may be distinguished from the female Old-squaw by the color of the belly, which is grayish dusky instead of pure white.

Old-squaw. *Harelda hyemalis*

♂ 21.00. ♀ 16.00

Ad. ♂ *in winter.* — Patch on side of neck blackish-brown (occasionally nearly absent); region in front of eye light gray; *rest of head, neck, upper breast, and back white;* back, wings, and tail brown, two white patches extending down the back; breast and upper belly brown; lower belly white; *two middle tail-feathers black, very long and narrow;* outer tail-feathers white;

base of bill black, tip yellow, band of pink between; legs and feet pale slate. *Ad. ♂ in late spring.* — Patch in front of eye gray; small patch back of eye white; *rest of head, neck, back, breast, and upper belly sooty black*, feathers of the back margined with reddish-brown; lower belly white; tail-feathers and feet as in winter. *Ad. ♀ in winter.* — Head, neck, and lower parts mostly white; top of head and sides of neck dusky; upper parts dusky-brown. *Ad. ♀ in spring.* — Similar to ♀ in winter, but sides of head and neck blackish; feathers of the back margined with brown. *Im. in winter.* — Either similar to *ad.* ♀ in winter, or with head and neck chiefly grayish; sides of head whitish; breast streaked with dusky.

The Old-squaw is a very common winter visitant on the coast of New York and New England from October to May. It does not come into the inner harbors as freely as the Whistler and Buffle-head, but feeds in small or large flocks in the surf close to the outer beaches, or in vast "rafts" over shoals at sea. It rides easily over the great rollers, or dives into and through them. Little companies are constantly moving here and there, flying, after they get under way, with ease and great rapidity. The Old-squaw is noted for its garrulousness, particularly in spring; the chattering of a flock is musical, resembling the syllables *honk, honk-a-link, honk-a-link* (Sanford). In mild days in spring and fall Old-squaws "tower," — that is, fly to a great height, and then descend with rushing wings.

The *long tail-feathers* of the male are very conspicuous, drooping below him as he lights in the water, or cocked up at an angle as he swims. His *white head* with the black spot behind the eye sufficiently characterizes the male, even when the long tail-feathers do not show. The females and young have much darker heads, and lack the long tail-feathers of the adult male, but are readily identified by the large amount of whitish about the sides of the head, and generally by the presence in the flock of long-tailed males. (See Mackay, "Auk," vol. ix. pp. 330–337.)

Buffle-head. *Charitonetta albeola*

14.75

Ad. ♂. — A *snow-white patch* from back of eye *over top of head;* rest of head and neck apparently black, crested and puffed out at the side (at close range showing purple, violet, and green reflections); broad ring around neck and under parts pure white; back black; wings black, with large white patches; bill dark gray; legs and feet flesh-color. *Ad.* ♀. — Head, neck, and upper parts sooty-brown; large *spot back of eye whitish;* wings brown, showing white when spread; under parts (except throat and neck) white; bill, legs, and feet dusky.

Nest, generally in a hole in a tree, usually near the water. *Eggs,* grayish-white, tinged with green.

The Buffle-head is a rather common migrant in October, March, and April along the coast of New York and New England, occurring also on large inland streams and ponds. It is a rather uncommon winter visitant from southern Maine southward, and is reported as breeding sparingly in northeastern Maine (Knight). It is the smallest of the sea ducks, and among the river ducks only the Green-winged Teal is smaller. It dives with the quickness of a grebe. Its habits along the sea-coast are similar to those of the Whistler, and it is often associated with that species, preferring the mouths of rivers, and the harbors and coves along the shore to the shoals well out at sea.

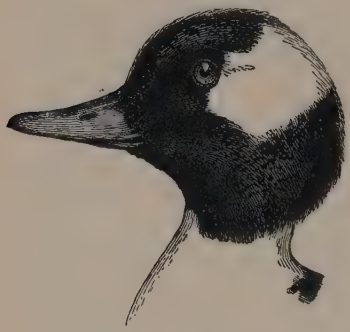


Fig. 85. Buffle-head

A male may be known by the large patch of white in the head, extending *from behind the eye* to the *top of the head.* The head-feathers are long, and give the head a

"bushy" look. The female and young males have a white patch extending from the eye to the back of the head. (See the following species, and the Hooded Merganser, p. 307.)

NOTE. — Barrow's Golden-eye, *Clangula islandica*, a species which resembles the following closely in appearance and habit, is a rare winter visitant on the Maine coast. The chief differences are in the purplish-blue of the head, and the shape of the white spot before the eye, which in this species is twice as large and somewhat crescent-shaped. It would not ordinarily be safe to attempt to distinguish the two species, unless the birds were in the hand.

AMERICAN GOLDEN-EYE; WHISTLER. *Clangula clangula americana*

20.00

Ad. ♂. — Head black (greenish in good light), slightly crested; *spot below and in front of eye white;* middle of back and tail black; entire under parts (except throat), broad ring around neck, and sides of upper back white; wing black, much of it covered with long white feathers when closed, and showing a broad patch of white when spread; bill black; feet orange. *Ad.* ♀. — Head *dull reddish-brown, no white spot;* back and band across breast dark grayish-brown; ring around neck and rest of under parts white; wing showing considerable white both when closed and when open; bill yellowish-brown; feet and legs yellowish.

Nest, in a hole in a tree, near the water. *Eggs*, bright pea-green, or olivaceous green.

The Whistler is a common winter visitant to the coast of New York and New England, arriving in October, and leaving in April. It breeds in northern Maine, notably at Lake Umbagog (see Brewster, "Auk," vol. xvii. pp. 207–216). The Whistler in winter is an inshore duck, coming into the small bays and harbors, and up the mouths of rivers, where it dives for shellfish and water plants. Sometimes when the shoals are frozen over, any small inland pond-hole will afford it food. Though generally wary, it has quickly taken advantage of the immunity

offered it on the Boston Back Bay, and may be seen any day in winter on each side of the Harvard Bridge.

The Whistler's flight is rapid and characteristic, and is accompanied by a sharp, whistling sound. When in the air,

Fig. 86. American Golden-eye

the white under parts and the white patches in the wing are conspicuous. From the Red-breasted Mergansers, which also show white below and on the wing, the short thick head and short neck distinguish it. The *black head* and the *small white spot* before the eye distinguish the male. The female has a dull *reddish-brown head* and is often mistaken by beginners for the very rare Red-head, or confused with the female Scaup Ducks. She may be separated from the latter by the lack of any white about the base of the bill.

Lesser Scaup Duck; Little Blue-bill. *Aythya affinis*

16.50

Ad. — Similar to the following species but smaller, and head and neck of male showing at close range purplish instead of greenish reflections.

The Lesser Scaup Duck is a common migrant off Long Island and in the lower Hudson Valley, occurring in September and October, and in February and March; in New England it is less common, and appears generally in the autumn, often in company with the following species. It occurs both on the coast and in inland ponds. It is doubtful whether it occurs in winter, though the Greater Scaup is common at that season. The two species resemble each other very closely, but may be distinguished in good light and at close range by the color of the head, which is purplish in the Lesser, greenish in the Greater. (See following species.)

Scaup Duck; Blue-bill. *Aythya marila*

♂ 18.50. ♀ 17.50

Ad. ♂. — *Head, neck, upper back, and breast black,* the head and neck showing greenish reflections in strong light; middle of back white, marked with narrow wavy black lines; speculum white; *a white stripe along wing when spread,* lower belly and sides pure white; under tail-coverts black; bill blue-gray; legs and feet lead-color. *Ad.* ♀. — Black of ♂ replaced by brown; *region around base of bill white;* wings brown; speculum and stripe in extended wing white; under parts not so pure white; bill and feet as in ♂.

The Scaup or Blue-bill is a common migrant along the coast of New York and New England in March and April, and in October and November; it is usually an abundant winter visitant in Long Island Sound, and occurs in winter at least as far north as Massachusetts Bay. Like the other sea ducks it occurs on large inland rivers and on fresh-water ponds near the sea. Blue-bills often occur in very large flocks, and when alarmed they swim toward a common centre, forming a compact bunch, which then swims away from the disturbing factor. They fly in a characteristic waving line, showing a stripe of white along the outstretched wing. The male may be known by his black head, neck,

and breast, and by the white back, crossed by wavy black lines. The *white face* of the female is very conspicuous, and affords an excellent field-mark.

Redhead. *Aythya americana*

19.00

Ad. ♂. — *Head and neck rich reddish-brown;* breast and upper back black; back gray, with very narrow wavy black lines; speculum gray; belly white; feathers under tail black; bill, broad and flat, rising at base abruptly toward forehead, slate, crossed by a black bar at tip; legs and feet gray. *Ad.* ♀. — Top of head and neck pale brown; back brownish-gray; chin white; throat, neck, breast, and sides brown, middle of belly white; lower belly brown; bill and feet slate.

The Redhead is a regular, though rare, migrant in New England; on the Long Island coast it is regular, though it varies in numbers; in the lower Hudson Valley it is a common migrant. It occurs in April and October, and occasionally winters off Long Island. It visits both the inland ponds and the coast. An adult male can be confused only with the much rarer Canvas-back, from which the broad flat bill should distinguish it. Care must be taken not to take the female Whistler for the Red-head; the former has a *dull* reddish-brown head, and shows a considerable patch of white on the wing. (See p. 297.)

River and Pond Ducks: Subfamily Anatinæ

Many of the diving ducks described in the preceding pages occur as migrants on nearly every large lake or river in the interior of New England and in eastern New York. Two of the Mergansers described in the following section also occur as migrants on inland ponds and streams. All these species, however, dive for their food, and may be thus distinguished from the true river or pond ducks, which obtain their food by tipping in shallow water, after the manner of

the common domestic duck. Seven species belonging to this division occur regularly in eastern New York and New England; all but one, however, are now so rare that the ordinary observer will hardly come across them. They must be sought for in the ponds of Maine or southeastern Massachusetts, where, however, numerous gunners are generally lying in wait for them in their favorite haunts. The Black Duck or Dusky Duck is still common, and may be met with as a migrant in any pond or stream; it breeds in many places, and winters in large numbers off the sea-shore. The Wood Duck, once found in summer near quiet forest pools and deserted mill ponds, is now very rare. The Mallard, the Widgeon, and the Pintail are migrants, occurring in varying numbers, but nowhere commonly; the Mallard occasionally winters off the coast. The two species of Teal, though becoming rare elsewhere, are still rather common fall migrants in Maine, and the Blue-winged Teal nests in the extreme northern and eastern counties of that state. (See Job, "Auk," vol. xiii. pp. 197–204.)

Wood Duck. *Aix sponsa*

18.50

Ad. ♂. — Top of head metallic green, ending in a *long crest of purple*, interspersed with narrow white feathers; sides of head black; *throat pure white*, the white running up into side of the head and hind neck, almost separating the black side of the head into two areas; upper parts brown; when seen in good light the wings show velvety black, purple, and white; tail dark, long and fan-shaped; upper breast rich reddish-chestnut, with small white arrowy markings, white mark edged with black before the bend of the wing; flanks buffy-brown; *rest of under parts white;* under tail-coverts dusky; bill dark; legs and feet brownish-yellow. *Ad.* ♀. — Top of head blackish; sides of head grayish-brown; ring round eye and *patch behind it white;* rest of upper parts brown, the wings at close range as in ♂; *throat pure white;* breast brown, mottled with buff; *belly white*, with here and there a dusky spot; bill dark; legs and feet yellowish-brown.

Nest, in holes in trees, near water. *Eggs*, ivory-white.

The Wood Duck was formerly a common summer resident throughout New York and New England, breeding about quiet ponds and slow streams; but it has diminished rapidly of late, and can hardly be considered common anywhere, unless in the wilder portions of northern New England. It is an uncommon winter visitant on Long Island, but elsewhere in New England occurs chiefly as a migrant in March and April, and from August to November, or as a rare summer resident. It may be found on small inland ponds or wooded streams. The male is unmistakable; the long crest-feathers and the black and white sides of the head give him a characteristic look. The female has a slight crest, but may be best distinguished by the *white eye-ring* and stripe of white behind the eye.

Pintail. *Dafila acuta*

♂ 28.00. ♀ 22.00

Ad. ♂. — Head, throat, and part of fore neck brown; hind neck black, separated from fore neck by a white stripe; back gray, with narrow wavy black lines; speculum bronze, with greenish reflections, bordered in front with cinnamon; long black feathers, edged with white, extend down the wing; *middle tail-feathers long and black;* lower fore neck, breast, and belly white; feathers under tail black; bill and feet slate. *Ad.* ♀. — Top of head and hind neck brown; back brown, the feathers edged with whitish; under parts whitish, spotted with dusky, darkest on neck; bill and feet slate. *Im.* ♂. — Similar to ♀, but with speculum as in *ad.* ♂.

The Pintail is a migrant through New York and New England, common off Long Island and in the Hudson Valley, but rare in most of New England. It occurs in Plymouth County, Mass., from the end of September through October, and again in April; in the Hudson Valley it is found till December, and off Long Island it occasionally winters. The adult male may be easily recognized by his long black tail-feathers, which are cocked up as he swims, but these are often not yet grown in the autumn. The male

may, however, be identified by the long slender neck and by the pure white under parts.

Blue-winged Teal. *Querquedula discors*

16.00

Ad. ♂. — Head apparently dusky, *a broad white crescent in front of the eye;* back brown, upper back mottled with buff; upper parts buffy or reddish-buff, everywhere spotted with black; *wing* when closed has a *light blue patch*, edged with white, and a concealed greenish patch; bill black; legs and feet yellow. *Ad.* ♀. — Top of head blackish; throat whitish, *no white crescent;* back and wings dusky; under parts gray, streaked on the breast with black; *wing as in* ♂, but with less blue; bill greenish-black; legs and feet greenish-yellow.

Nest, on the ground, in weeds and rushes. *Eggs*, pale buff.

The Blue-winged Teal is a migrant through New York and New England, breeding rarely in northern and eastern Maine. It has become scarcer of late years, and though still commoner than the following species, it can hardly be called common except in the wilder portions of Maine. It is everywhere rarer in spring than in autumn, occurring generally from the end of August to October. Teal, like the other river ducks, feed at night, and lie concealed by day. Toward dusk they approach the pond or marsh where they hope to feed, and may be known on the wing by their small size and great speed. When seen by day the male is easily recognized by the *white crescent* before the eye and by the blue in the wing; the latter mark also distinguishes the female. (See the following species.)

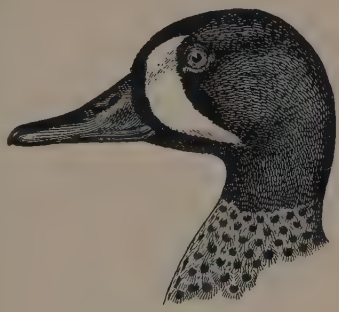


Fig. 87. Blue-winged Teal

Green-winged Teal. *Nettion carolinensis*

14.50

Ad. ♂. — Head chiefly chestnut; chin black, a broad stripe from eye metallic-green, ending in a black tuft on hind neck; upper back and flanks gray, finely barred with black, like a guinea hen; a white band in front of bend of wing; lower back brown; *speculum metallic-green*, edged with black, and, forward, with a bit of light chestnut; upper breast reddish-buff, with round black spots, rest of lower parts whitish; under tail-coverts black; bill black; legs and feet dark brown. *Ad.* ♀. — Top of head and back dusky-brownish, the feathers of the back edged with buff; throat buffy; speculum metallic-green, a stripe of white tinged with chestnut forward; breast buff, spotted with blackish; rest of under parts whitish; bill brown; legs and feet brown. *Im.* ♂. — Similar to ♀, but under parts chiefly white.

The Green-winged Teal is a migrant through New York and New England, and a winter visitant in the vicinity of New York city. It occurs as a migrant in April, and in September and October, alighting in inland ponds and marshes, often associating with the preceding species and with Black Duck. It has become rare of late years, and, except in the wilder portions of Maine, would hardly be observed, except by constant visits to gunners' stands. An adult male is readily distinguished by the chestnut head with the green and black stripe behind the eye. A female or immature bird would be recognized as a teal by its small size, and as belonging to this species if the green on the wing can be made out. The adult Blue-winged Teal also has some green on the wing, but a larger amount of blue.

Baldpate; American Widgeon. *Mareca americana*

19.00

Ad. ♂. — *Forehead and top of head white;* sides of head blackish; rest of head and neck buff, speckled with black; back brown; wing with a broad white patch; speculum metallic-green, bordered with velvety black; upper breast and sides chestnut; rest of under parts white; bill and feet slate. ♀ and *Im.* ♂. — Top of head

blackish; back dusky, barred with buff; speculum black; throat and neck buff, streaked with dusky, breast and sides reddish-brown, with dusky spots on the breast; rest of under parts white; bill and feet brown.

The Widgeon is a migrant through New York and New England, common in the lower Hudson Valley, uncommon off Long Island, and in New England. It occurs in September and October, and in April. The male may be known by the *white forehead;* care must, however, be taken not to confuse the female Scaup, a diving duck, with the Widgeon. (See p. 299.)

Black Duck. *Anas obscura*

Red-legged Black Duck. *Anas obscura rubripes*

22.00–25.00

Ad. ♂. — Top of head blackish; sides of head, neck, and throat light buffy-brown; rest of plumage dark brown (apparently black, except in strong light); speculum iridescent purple or greenish, edged with velvety black; *under sides of wings silvery;* bill broad and fairly long, yellowish-green or olive in the Black Duck (see note below); feet of Black Duck brown.

Nest, on the ground, generally near the water. *Eggs*, varying from pale buff to pale greenish-buff.

The Black Duck breeds throughout New England and on Long Island, commonly in the northern portions of New Hampshire and Maine, rarely in southern New England and on Long Island. It is a very common migrant in March and April, and from August to November. Along the sea-coast it is a winter visitant, abundant in southern New England and on Long Island, not so common along the Maine coast. It feeds at night in ponds and marshes, or up the tidal creeks and estuaries, retiring by day either to the shelter of reeds or to the sea, well off shore.

It may be known when it flies by its dusky or blackish under parts, and by the *silvery lining* under its wings. The American Scoter is also entirely black, and the two

may be confused along the sea-shore, where the Scoter is found from September to May. The latter, however, dives for its food, while the Black Duck, when at sea, simply rides the water, till the approach of dusk sends it back to its feeding-ground; it never dives. It often comes out on the sand-bars and stands or squats there in company with gulls.

NOTE. — The Red-legged Black Duck is a larger race, with *red legs* and a *yellow bill;* it breeds north of New England, and is found here as a migrant or winter visitant. The Black Ducks seen in New York or New England in summer belong to the smaller race.

MALLARD. *Anas boschas*

23.00

Ad. ♂. — *Head and neck iridescent green,* a white ring almost entirely around neck, broken only on the nape; upper back brown; lower back black; wings ash-gray; speculum violet, bordered in front and behind with black and white, the white showing in flight; tail nearly all white; breast chestnut; feathers under tail black; rest of under parts silver-gray; bill and legs yellow; feet reddish-orange. *Ad.* ♀. — Upper parts brownish; feathers edged with buff; throat buff; speculum like that of ♂; breast brownish-buff, spotted with black; lower parts white, spotted with dusky; tail light-colored; bill greenish-yellow; feet yellowish.

The Mallard is a rare or uncommon migrant through eastern New York and New England, occurring in September and October, and in March and April. It occasionally winters off the coast. Its habits are very similar to those of the Black Duck, and it often associates with a flock of the latter. The male is readily recognized by his resemblance to the domestic drake; the female resembles the female Black Duck, but may be recognized by her lighter under parts and by the white in the outspread wing.

Mergansers: Subfamily Merginæ

Three species of Merganser occur in New York and New England. One, the American Merganser, is a bird of fresh-

water streams and lakes, breeding in northern New England and occurring as a migrant or winter visitant on streams and lakes. The Red-breasted Merganser is a common winter visitant off the sea-coast. Both of these species get their food by diving and pursuing fish under water; both when flying show large areas of white in the wings. A third species, the Hooded Merganser, is a rare summer resident in northern New England and a rather uncommon migrant in the rest of New England and in New York.

Hooded Merganser. *Lophodytes cucullatus*

17.50

Ad. ♂. — Head, neck, and upper back black, *a broad white patch extending from back of the eye backward, with a narrow black border*, forming a crest which is either erected or extended backward; two black bands before the bend of the wing; flanks reddish-brown; rest of under parts white; wing-patch and long feathers on the back white. *Ad.* ♀. — Throat light; rest of head, with bushy crest, dull reddish-brown; rest of upper parts sooty-brown; wing with a white bar; flanks dark; rest of under parts white. *Im.* ♂. — Head and neck light brown; crest brownish-white, with brown edge; otherwise like ♀.

Nest, in holes in trees. *Eggs*, white.

The Hooded Merganser breeds in some of the lakes in northern and eastern Maine, and in northeastern New Hampshire; elsewhere in New England and New York it is a rather uncommon migrant in October, March, and April, and a rare winter visitant. It occurs on inland streams and ponds, and is noted for the speed of its flight. The male can be confused only with the Buffle-head, but should be distinguished by the long slender bill, and by the fact that the white patch in the crown does not reach the top of the head, particularly when the crest is not erected. The Merganser's flanks, moreover, are brown; the Buffle-head's snowy white. The female has the characteristic merganser head, with a long bill and loose crest

behind, but is much smaller than either of her relatives, the two following species.

Red-breasted Merganser; Sheldrake. *Merganser serrator*

22.00

Ad. ♂. — Head dark green (at a distance apparently black); *long crest on hind head;* a broad white ring around neck; upper back black, lower back gray; wing mostly white, crossed by two black bars; upper breast buff, streaked with black; rest of under parts white; bill, legs, and feet red. *Ad.* ♀ and *Im.* — Throat white; rest of head and upper neck, with a crest on hind head, reddish-brown; back and tail slate-gray; wings darker, when spread showing a white patch; under parts white; bill, legs, and feet reddish-brown.

Nest, on the ground, either in rushes or under thick spruces. *Eggs,* creamy buff.

The Red-breasted Merganser is an abundant migrant along the sea-coast in March and April, and in October and November; it is occasionally found as a migrant on inland waters, especially near the sea, but the common inland merganser is the following species. The Red-breasted Merganser is also a common winter visitant on the New England coast, and on the lower Hudson River, but is not common in winter off Long Island. According to Knight ("Birds of Maine"), it is quite a common summer resident along the eastern half of the Maine coast and also breeds on some of the interior lakes.

When feeding it keeps in shallow water, either close to the shore or over shoals, and dives in pursuit of its food. The male is unmistakable: the long bill, the black head set off by the white collar below, identify him as a merganser. The loose feathers of the crest, and the reddish-brown breast distinguish him from his relative, the American Merganser. The females and young when seen in good light show a reddish-brown neck and head. When flying,

the long outstretched neck and head and the gray tone of the back distinguish them from the other sea ducks with white wing-patches. In the female American Merganser the

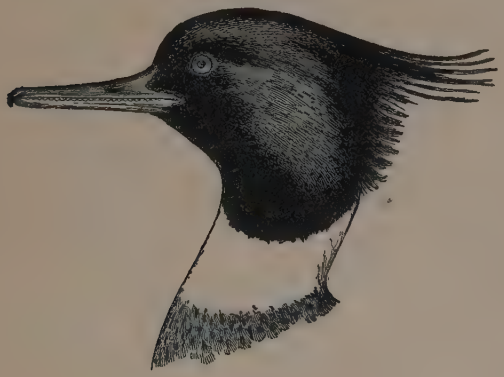


Fig. 88. Red-breasted Merganser

upper throat only is white, and the top of the head and lower throat are darker brown than in the Red-breasted Merganser; moreover, the former is almost never seen in the sea itself, though it occurs occasionally in estuaries and at the mouths of rivers.

American Merganser; Goosander; Sheldrake.
Merganser americanus

25.00

Ad. ♂. — Head and neck apparently black (glossy green in strong light); *no crest on hind head;* middle of back black; tail gray; broad collar about neck, sides of upper back, and *entire under parts* (except neck) *pure white* (tinged below in strong light with salmon); wings white, showing black quill-feathers and a black bar when spread; bill and feet red. *Ad.* ♀. — Throat white; rest of head and neck, with a crest on hind head, reddish-brown; rest of upper parts and tail gray; wings black, with a white

patch; under parts white; bill reddish-brown; feet reddish-orange.

Nest, in a hollow tree. *Eggs*, white, tinged with buff.

The American Merganser is a summer resident of the streams and lakes in northern New Hampshire, and in northern and eastern Maine. In the rest of New England it occurs as a rather common migrant along the larger streams, and as a winter visitant wherever falls and rapids keep the streams open during the winter, as on the Merrimac below Manchester, N. H., and along the Connecticut below Enfield; it is "tolerably common" along the Hudson from January to March. Like the preceding species, it is an expert diver, and pursues small fish in the shallow water. When it rises from the water, it generally pats the surface for some distance with its feet, showing the broad white patches on the wing. (See preceding species.)

CORMORANTS, GANNETS, ETC.: ORDER STEGANOPODES

CORMORANTS: FAMILY PHALACROCORACIDÆ

DOUBLE-CRESTED CORMORANT. *Phalacrocorax dilophus*

30.00

Ad. — Apparently entirely black; in breeding plumage a tuft of feathers rises from each side of the head, but these are wanting after mid-summer. *Im.* — Head and neck and under parts grayish-brown.

The Double-crested Cormorant is a summer resident from the Bay of Fundy northward, and occurs as a not uncommon migrant along the coast of New York and New England, passing north in April and May, and returning from August to November. It winters sparingly in southern New England.

When seen off our coast, Cormorants are generally flying at some distance above the water, with necks *outstretched*, and look like dark-colored geese or very large ducks. Their wings look large in proportion to the bird, and their wing-strokes are much slower than a loon's. Occasionally they light on a point of rock or a spar-buoy, when they bend the neck in a characteristic curve. When they perch, they squat on their tails and feet, and stand nearly upright. When thus sitting they often spread their wings and hold them for some time in what Dr. Townsend has called a "spread-eagle" posture, resembling that bird as pictured on our coins and coat of arms.

NOTE. — The Cormorant (*Phalacrocorax carbo*) is ordinarily a very rare visitant in late fall and winter off the New England coast; a small colony of this species winter each year on Cormorant Rocks in Narragansett Bay. (See Howe and Sturtevant, *Birds of Rhode Island*, p. 33.)

GANNETS: FAMILY SULIDÆ

GANNET. *Sula bassana*

35.00. Tail 9.50. Bill 4.00

Ad. — Entire bird white, except the ends of the quill-feathers which are black; the head and neck are yellowish when seen at close range. *Im.* — Upper parts brownish; under parts lighter; a white band across the tail.

The Gannet breeds on a few rocky cliffs in the Gulf of St. Lawrence, and occurs as a rather uncommon migrant in May, and again in October and November, off the coast of New York and New England. A few Gannets winter off Long Island Sound. Monomoy Point, eight miles from Chatham, Mass., is an excellent place to observe them, as they fish over the shoals known as the Shovels. The adult birds are as large as a goose, pure white, except the tips of

the wings, which are black for some distance. Immature birds look almost black; only the under parts and a band across the tail are light-colored. In a large flock there are birds in intermediate stages of plumage. The old birds are unmistakable; in the sunlight their pure white looks almost luminous. In any plumage the habit of diving headlong into the water from a height of from seventy-five to a hundred feet will distinguish them from any other large bird that goes in flocks. When flying, the long head and neck extend in front and the long tail out behind, giving them a very different appearance from that of a gull.

PETRELS, SHEARWATERS, ETC.: ORDER TUBINARES

PETRELS AND SHEARWATERS: FAMILY PROCELLARIIDÆ

Two species of Shearwater and two species of Petrel occur regularly at some distance off the shores of New York and New England. Leach's Petrel breeds on islands off the coast of Maine; Wilson's Petrel and the two Shearwaters occur as summer visitants. They may often be observed in numbers from the decks of vessels crossing to the Maritime Provinces, but still more abundantly and at close range about the fishing schooners, where they collect to feed on the refuse thrown overboard.

Wilson's Petrel. *Oceanites oceanicus*

7.00

Ad. — Sooty-blackish; base of the tail white; tail square.

Wilson's Petrel is a common summer visitant off the coast of New York and New England from June to September. As soon as a vessel gets a few miles from shore,

petrels appear flying close over the water, in this direction and that, turning quickly, or stopping to hover a moment with outstretched feet to pick up some morsel. They often collect in the wake of a vessel, and follow it for hours; but though the *white rump* and their habit of *walking* on the water proclaim them petrels, they rarely come near enough to show the *square tail* which separates them from the following species. Wilson's Petrel is also darker and smaller than Leach's Petrel, but both look almost black against the water. If one accompanies some fishing vessel to the fishing-grounds, petrels and shearwaters may be attracted close to the boat by throwing over cod liver, and then the two petrels may be distinguished. The common species in summer anywhere off the coast is Wilson's Petrel; Leach's Petrel, though breeding at that season on the coast of Maine, is not commonly met with except as a migrant in spring and in autumn. Occasionally petrels come close in shore, particularly, according to Dr. Townsend, in foggy weather.

Leach's Petrel. *Oceanodroma leucorhoa*

8.00

Ad. — Entire bird sooty-brown (often apparently black); base of tail white; tail forked.

Nest, in burrows, on rocky islands. *Egg*, white.

Leach's Petrel is a summer resident of the North Atlantic coast, breeding on the extreme outer islands along the coast of Maine, and from there northward. It arrives in May, and leaves in September. On Seal, Little Duck, and Green Islands there are interesting colonies of these birds. Rev. Mr. Job ("Among the Water-Fowl," p. 125) describes a visit to one of these colonies. The burrows that he opened ran under the turf just below the roots of the grass, and ended in a sort of pocket in which a single bird was incubating the single egg. Sometimes both

parents were found in the burrow if the egg was not yet laid. The presence of the birds on the island would not be suspected during the daytime, for one bird keeps close within the burrow and the other is presumably feeding far out at sea. At night, however, the air is filled with the twittering of birds, coming and going to and from the burrows.

Petrels are attracted to vessels that pass across the Bay of Maine, and also follow trans-Atlantic liners far out over the ocean; they may be observed from the stern of the boat, but it is very difficult to see the tail clearly enough

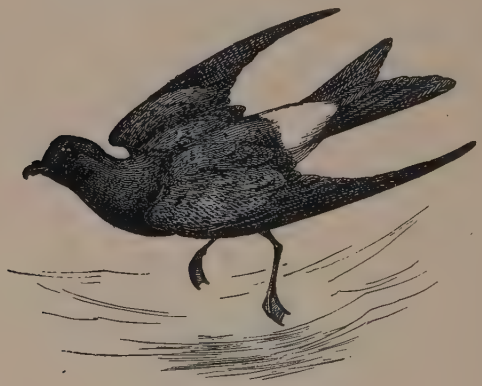


FIG. 89. Leach's Petrel

to distinguish between the *forked tail* of this species and the square tail of Wilson's Petrel. Wilson's Petrel is darker, almost black, but it is also difficult to see this difference in color on the water. Both species have the bright white rump, contrasting with the dark back, wings, and tail, and both hover over the water, often with legs down, as if walking upon it. Leach's Petrel is occasionally found on inland waters, apparently blown in by a storm. (See preceding species.)

SOOTY SHEARWATER. *Puffinus fuliginosus*

17.00

Ad. — Upper parts sooty; under parts lighter; bill blackish.

The Sooty Shearwater is a regular summer visitant to the North Atlantic, though much less common than the following species, which it resembles closely in flight and habits. It is readily distinguished by its uniformly dark appearance. "At a distance it looks as black as a crow" (Brewster).

GREATER SHEARWATER; HAGDON; HAGLET. *Puffinus gravis*

20.00

Ad. — Upper parts dark brown; under parts white; band across middle of tail white; bill blackish.

The Greater Shearwater is a summer visitor to the North Atlantic from May to September. Shearwaters may be regularly observed by any one crossing from New York or New England to the Maritime Provinces, or from trans-Atlantic liners. In fact, in mid-Atlantic, shearwaters and petrels are sometimes the only birds in sight for days. The former do not seem to be attracted to the ship as the latter are. They do not congregate about the stern or follow in the wake, but are seen to the right and left, ahead or behind. With set wings they glide just above the waves, over the crest and down into the troughs, occasionally settling upon the water, then rising and continuing their flight. They also gather in great numbers about the off-shore fishing-boats, waiting for the "gurry" that is thrown over after the fish are cleaned.

NOTE. — Cory's Shearwater (*Puffinus borealis*) occurs in summer with the preceding, which it resembles in size and habits and rather closely in coloration. It may be distinguished at close range by its yellow bill.

TERNS, GULLS, AND JAEGERS: ORDER LONGIPENNES

GULLS AND TERNS: FAMILY LARIDÆ

Terns: Subfamily Sterninæ

Six species of Tern occur on the sea-coast of New York and New England; two, the Common Tern and the Black Tern, occasionally appear as casual visitants on large inland waters. The Common Tern breeds locally off the coast of New York and southern New England, and commonly along the coast of Maine. It occurs as a migrant along the whole coast; nearly every tern seen by the casual observer belongs to this species, just as nearly every gull which the ordinary observer sees is a Herring Gull. The Roseate Tern breeds locally from Massachusetts southward; the Arctic Tern from Massachusetts northward. The Least Tern, a very small species, breeds sparingly from Cape Cod southward. The Caspian Tern, a very large species, is a rare migrant in August and September; the Black Tern is an irregular migrant in late summer. (See p. 319, Common Tern.)

BLACK TERN. *Hydrochelidon nigra surinamensis*

10.00

Ad. in early summer. — Head, neck, and under parts sooty-black; feathers under the tail white; back, wings, and tail dark gray; bill black. *Ad. in late summer and autumn.* — Head, neck, and under parts white; top of head and *stripe back of eye dusky;* back, wings, and tail *deep pearl-gray;* bill black. *Im.* — Similar to fall adult, but upper parts browner; sides washed with dusky.

The Black Tern is a rather irregular migrant along the coast of New York and New England in summer and early autumn. It is rarely seen in its adult black plumage, though it is occasionally seen with under parts spotted

with black and white. Even in the autumn plumage it may be readily distinguished from any other tern, except the Least, by its small size. Its tail, too, is less deeply forked than in other adult terns. From the adult Least Tern it may be distinguished by the *dark* gray of its upper parts and by its *black* bill. An immature Least Tern has a blackish bill, but is considerably smaller than a Black Tern, and has a brownish tinge on its upper parts.

Least Tern. *Sterna antillarum*

9.00

Ad. in summer. — *Forehead white*, inclosed by black lines from the eye to the bill; rest of top of head black; back, wings, and tail light pearl-gray; under parts white; *bill bright yellow*, tip blackish. *Ad. in autumn.* — Similar, but head grayish-white; bill dull yellowish. *Im.* — Like fall adult, but back spotted with brownish; bill blackish.

The Least Tern is a summer resident of southern New England and Long Island from May to September; it is local, and nowhere common. It breeds sparingly on the south shore of Martha's Vineyard, and perhaps at Chatham on Cape Cod. Its cry has been described as a "shrill staccato *yip, yip, yip*" (Job). Its size distinguishes it from the Common Tern. The *light* pearl-gray of its back and wings distinguishes it from the occasional Sooty Tern that might occur on the same coast in August or September. The *white border* that separates the *black cap* from the bill is an excellent field-mark, but this must not be confused with the whitish forehead of the immature Common and Roseate Terns.

Roseate Tern. *Sterna dougalli*

15.50

Ad. in summer. — Top of head black; wings and back pale pearl-gray; tail white, the outer feathers much longer than the

wings ; under parts apparently white (really tinged with rose-pink); *bill black*, tinged at base with reddish. *Ad. in autumn.* — Similar, but forehead and forward portion of crown white, streaked with blackish. *Im.* — Similar to fall adult.

The Roseate Tern is a rare summer resident of the coast of southern New England and New York. On the island of Muskeget, between Martha's Vineyard and Nantucket, there is a large colony of Roseate Terns ; a smaller colony is established on Penikese, and a few other colonies are found along Long Island Sound.

Its times of arrival and departure and its habits are similar to those of the Common Tern, but an adult may easily be distinguished, when seen at close range, by the *bill*, which is chiefly *black*, in strong contrast to the pure white under parts, and by the very long and pure white outer tail-feathers. Its cry, too, differs from that of the commoner tern, resembling the syllable *cack ;* this it utters on the breeding-ground as it flies at an intruder, its bill pointing straight at his face, threatening till the last moment to strike him. The young bird cannot be distinguished in life from the young Common Tern ; care must be taken, too, not to take a young Common Tern, which has a dark bill, for a Roseate Tern. A combination of a black bill with an entirely black crown and long white tail-feathers makes identification certain.

Arctic Tern. *Sterna paradisæa*

15.50

Ad. in summer. — Top of head black ; back and wings pearl-gray ; tail white; under parts grayish-white ; *bill rich red*. *Ad. in autumn.* — Similar, but lower parts white ; forehead white ; crown white, streaked with black ; bill as in summer. *Im.* — Similar to fall adult, but terminal half of bill blackish.

The Arctic Tern is a common summer resident on the coast of Maine. On Matinicus Rock, Machias Seal Island, and

Metinic Green Island, there are large colonies. Its most southern colony is on Muskeget Island, Mass. It migrates southward with the Common Tern, and returns at the same time. At close range it may be distinguished from the Common Tern by its bill, which is uniform *deep red*. Its tail, too, is a trifle longer. Its notes, according to Mr. Brewster, may be distinguished: "The usual cry corresponds to the *tearr* of *S. hirundo* [the Common Tern], but is shriller, ending in a rising inflection, and sounding very like the squeal of a pig."

Common Tern. *Sterna hirundo*

15.00

Ad. in summer. — Top of head black; back and wings pearl-gray; tail white; under parts grayish-white; *bill red, blackish at tip. Ad. in autumn.* — Similar, but forehead and forward part of crown white, mixed with black on the crown; under parts pure white; bill less red. *Im.* — Similar to fall adult, but bill brownish.

The Common Tern is a summer resident on the coast of New York and New England, but south of the Maine coast

Fig. 90. Common Tern

it breeds in only a few colonies; Gull Island, off Long Island, Muskeget Island, and Penikese, near Martha's Vineyard, are the largest of these. On the Maine coast there are many colonies. The Tern arrives in May, and leaves in

September. Along those parts of the coast where it does not breed, it is seen as a migrant in May, and more commonly in August and September. Many young birds may be found in late summer congregating on beaches at some distance from the nearest breeding-ground.

The ordinary cries of the Common Tern are a harsh, short *kip*, and a continual *tee, tee, tee*, which breaks, when the bird is excited, into a harsh *tee'-arr ;* no one who has ever set foot on an island colonized by terns will ever forget the ear-splitting din made by thousands of angry birds uttering this cry. Terns may easily be distinguished from gulls by the long forked tail ; in adults, moreover, the whole top of the head is black. When feeding, terns hover at some distance above the water, with bill pointing downward, and seize their prey by a quick downward plunge, which carries them often well under water. Their flight is more buoyant than a gull's ; each stroke of the long, narrow wings lifts them easily upward. When not feeding, they gather in large flocks on some exposed sand-spit, but are restless, and often rise, wheel about, and settle again, for no apparent reason. They also light on spindles, spars, and any available perch, and often on the water. When seen near at hand, the *red bill* with its *black tip* is conspicuous, and distinguishes the Common Tern from the Arctic and Roseate terns. Young birds and old birds in the fall have whitish foreheads. (See the two preceding species.)

Caspian Tern. *Sterna caspia*

21.00

Ad. — **Top of head black; back and wings pearl-gray; tail and under parts white; *bill bright red.***

When a student has learned readily to distinguish a tern from a gull he may hope to identify the Caspian Tern, which is a rare migrant off the coast in August and Sep-

tember. The black cap, the forked tail, and the *red bill* mark it as a tern; its size separates it from the other species found on our coast.

Gulls: Subfamily Larinæ

Six species of Gull occur commonly in New York and New England. Most of them are found only at the sea-coast, though the Herring Gull often occurs on large inland waters, and the smaller Bonaparte's Gull is a rare migrant inland. One species, the Laughing Gull, breeds from the southern coast of Maine southward; the Herring Gull breeds all along the coast of Maine; the other four species are only migrants or winter visitants. The Kittiwake is a common winter visitant, generally at some distance off shore; the Black-backed Gull is a not uncommon winter visitant on the outer beaches; the Bonaparte's Gull is a common migrant, and the Ring-billed Gull is rare off the New England coast, but a common winter visitant off Long Island. All the Gulls are equally at home in the air or on the water; they also spend much of their time standing on the exposed flats and sand-bars, generally in flocks, sometimes of great size. They are great scavengers, circling continually over the water, and when they spy some bit of floating refuse, stooping to pick it up in the bill; they also subsist on dead fish cast up on the beach.

A Gull may be distinguished from a Tern, which it resembles in general appearance and in its powers of flight, by its rounded tail; Terns, moreover, constantly plunge from a height into the water, striking it with a splash; of the Gulls only the Kittiwake does this regularly. The brown Gulls seen commonly in winter are immature Herring Gulls, of the same species as the gray and white Gulls with which they associate.

Bonaparte's Gull. *Larus philadelphia*

14.00

Ad. in spring and summer. — Head black; tail and under parts white; back and wings pearl-gray; *outer wing-feathers white nearly to the tip*, which is black; bill black; feet rich orange-red. *Ad. in autumn.* — Head whitish, a dusky spot back of the eye; otherwise like the adult in summer; bill black; feet pale flesh-color. *Im.* — Similar to fall adult, but tail crossed at the tip by a black band.

Bonaparte's Gull is a common migrant along the coast of New York and New England, a rare migrant on the Hudson, and a rather rare straggler to other inland waters, occurring in April and from August to October; it winters sparingly along Long Island Sound. It is an unsuspicious species, allowing a near approach. In grace it almost equals the terns, sinking gently on the water or feeding daintily just over the surf. In spring it is easily distinguished from all other gulls, except the Laughing Gull, by the black head and throat. In fall, when it has lost this plumage, it may be distinguished from the Herring Gull by its size, from the Kittiwake by its black bill and by its preference for the inshore waters, and from the Laughing Gull at this season by the *wings*, which have the general effect of *white, tipped with black.* The young birds have the tip of the tail crossed by a broad black band. Along the coast of Maine and north of Cape Cod the Laughing Gull is very rare; south of Cape Cod in the summer the Bonaparte's Gull does not occur.

Laughing Gull. *Larus atricilla*

16.50

Ad. — *Head black;* back and wings bluish-gray; hind neck, tail, and under parts white; *outer quill-feathers entirely black;* bill and feet dark brownish-red. *Ad. in autumn.* — Similar, but head white, streaked on the sides and hind neck with dusky. *Im.* — Similar to winter adult, but upper parts brown, tail broadly tipped with black.

Nest, on the ground, of grass and seaweed. *Eggs*, grayish or greenish, thickly spotted and scrawled with brown and purplish.

The Laughing Gull is a summer resident of New England and New York, breeding in a few stations from Metinic Green Island on the coast of Maine southward. The largest colony is on Muskeget Island, near Nantucket. In 1900 over a hundred pair were nesting here, and when the terns rose in a vast cloud and filled the air with their harsh din, the Gulls floating above them uttered cries like the laughter of a lunatic. During the summer months the *black hood* easily distinguishes the Laughing Gull from any other gull or tern that breeds on our coast. Bonaparte's Gull, which is a spring and fall migrant along the coast, has in spring the same black hood, but in the fall both species lose it; they may always be distinguished by the *outer wing-feathers* which are *black* in the Laughing Gull, white with black tips in the Bonaparte's Gull. (See preceding species.)

Ring-billed Gull. *Larus delawarensis*

18.50

Ad. in summer. — Head, neck, tail, and under parts white; back and wings pearl-gray; ends of quill-feathers black, the first two, for over six inches, spotted with white near the tip, or tipped with white; bill yellow, crossed near tip by a black band which does not show except at very close range; feet pale yellow. *Ad. in winter.* — Similar, but top of head and hind neck streaked with brownish. *Im.* — Brownish-dusky above; tail blackish toward the tip; bill blackish.

The Ring-billed Gull is a common winter visitant off the coast of Long Island, and a rare migrant along the coast of New England. It is very difficult to distinguish this species from the Herring Gull. If it is seen with Herring Gulls, its smaller size and greater tameness should distinguish it. (See under Kittiwake, p. 327.)

Herring Gull. *Larus argentatus*

24.00

Ad. in summer. — Head, neck, tail, and under parts pure white; back and wings pearl-gray; ends of quill-feathers black, the two outer, for over seven inches, spotted near the extremity with white and tipped with white; bill yellow; feet pale flesh-color. *Ad. in winter.* — Similar, but head and hind neck streaked with grayish. *Im. in the first winter.* — Upper and under parts brownish; tips of wings and tail blackish. Later in various stages with whitish head, and brown upper parts; tail white with a broad black tip; bill crossed by a dark band at the tip.

Nest, of grass, moss, etc., either on the ground or in trees. *Eggs,* grayish-brown, blotched with chocolate.

The Herring Gull breeds commonly along the coast of Maine and less commonly on some of the inland lakes of

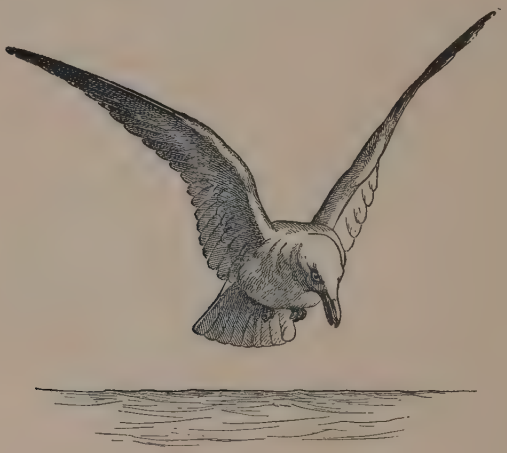


Fig. 91. Herring Gull

that State. On Great Duck Island off Mt. Desert, on Little Spoon Island, and on No Man's Land very large colonies now breed. In winter it is very common along the coast of New York and New England and is the common gull in all

the harbors. Though none are now known to breed regularly west of No Man's Land off Penobscot Bay, flocks of greater or less size spend the whole summer off the north shore of Massachusetts, and a few are found at the same season off Nantucket and the Vineyard. Early in August these flocks receive accessions from the north, and by the end of September large flocks have returned to their winter feeding-grounds in the harbors of cities and settlements, large or small. At this season, too, and in spring, gulls visit inland waters, settling on ponds near the sea-coast as long as there is open water; along the Hudson and the Connecticut they are common migrants, but they are very rare migrants in Berkshire County, Mass. By the end of April, migration is practically over. On the breeding-ground they regularly light on trees, but during the rest of the year, they spend their time either floating on the water, or circling over it, in search of refuse, or gather in large companies on the exposed sand-bars and mud-flats. If disturbed on the breeding-ground the gulls circle about overhead, repeating ceaselessly a dry *kak*, *kak-kak*, or a loud cry like the scream of a Red-shouldered Hawk. In winter, when flocks are settling down on a sand-bar, they are often very noisy, whining and squealing in a high-pitched voice.

The old birds have the head, tail, and under parts white, and wings and back gray; the wings are tipped with black. The immature birds are at first uniformly brown, but as they begin to change to the adult plumage, many intermediate stages are to be seen. The Herring Gull is by far the commonest species in winter; in summer the much smaller Tern, or Mackerel Gull, is commoner in certain waters, as about the islands south of Cape Cod, and along parts of Long Island Sound. It will be well, before attempting to identify the other, less common species of gull or tern, to study carefully the appearance of the gulls which are to be seen in every harbor along our coast, till

one is thoroughly familiar with their size and their different plumages.

Great Black-backed Gull. *Larus marinus*

29.00

Ad. in summer. — Tail and under parts pure white; back and wings apparently black (really dark brown); wings edged posteriorly with white; bill yellow; feet pale flesh-color. *Ad. in winter.* — Similar, but top of head and hind neck streaked with dusky. *Im.* — Upper parts dusky, tail dusky, crossed near the tip by a narrow band of brownish-white; head, neck, and under parts white, streaked and washed with brown.

The Black-backed Gull is a winter resident along the seacoast of New York and New England. A few individuals arrive in August, and a few linger till May, but the species is commonest in the winter months. It is much less common, however, than the Herring Gull, and as a rule keeps to the outer shores and beaches. Occasionally, however, one or two may be observed in a harbor or even in a fresh-water pond near the sea; there are generally one or two among the Herring Gulls that gather off T wharf in Boston. A common cry of the Black-backed Gull is a harsh *kyow*, suggesting the note of the Green Heron.

When a large flock of gulls are standing on a flat or sandbar, the mature Black-backed Gulls will be easily distinguished from the Herring Gulls, if they stand with their backs and sides toward the observer; the black wings and back will then present a striking contrast to the pure white head and neck. To identify a bird when flying, one must be sure to get a view of the upper part of the wings; even a Herring Gull will often appear to have dark wings, when the under surface is seen in shadow. The immature Black-backed Gulls can often be told from the immature Herring Gulls only if the two stand side by side, when the difference in size becomes apparent.

Kittiwake. *Rissa tridactyla*

16.00

Ad. in winter. — Head, tail, and under parts white; a dusky spot back of the eye, which however may disappear as early as February; wings and back pearl-gray; wings tipped for less than three inches with unspotted black; bill yellow; *feet black. Im.* — Similar, but all except the outer pair of tail-feathers tipped with a broad black band; first three quill-feathers black; a blackish patch on the hind neck and another near the bend of the wing; bill black; feet yellowish.

The Kittiwake is a common winter visitor to the sea-coast of New England, and a common transient visitor off the coast of Long Island, where a few birds winter. It is the most pelagic of our gulls (rarely approaching the beaches or harbors), seeking its food well out at sea. Flocks of these gulls circle about the fishermen, expecting the refuse thrown overboard after the fish are cleaned, and during the winter and early spring many follow the trans-Atlantic liners for days, playing with exquisite grace about the stern of the ship, and often plunging into the water from a considerable height. Their cry resembles the syllables *keet, keet, wäck, wäck.*

They may be known from Herring Gulls, which they resemble closely in coloration, by their much smaller size, and their more graceful flight. If the adult birds are seen at close range, the color of the feet and the different pattern of the tips of the quill-feathers will distinguish the Kittiwake from either the much larger Herring Gull or the somewhat larger Ring-billed Gull. The adult Kittiwake has black feet; the other two species have feet of pale flesh-color. In the Kittiwake, only a couple of inches at the tips of the wings are black, *unspotted* with white; this black tip offers a marked contrast to the gray wing. In the other two species the dark tip is over six inches long, is spotted with white near the tip, and inasmuch as it runs back some dis-

tance along the outer wing-feather, it does not give the impression of a well-defined tip, as in the Kittiwake. The immature Kittiwake is readily told by the black-tipped tail, and by the broad black edging along the forward portion of the wing.

JAEGERS: FAMILY STERCORARIIDÆ

JAEGER: *Stercorarius*

longicaudus.	21.00
parasiticus.	17.00
pomarinus.	22.00

Upper parts varying from blackish to brown; lower parts varying from dark brown to whitish; central pair of tail-feathers often longer than the others (over six inches longer than the others in the adult Long-tailed Jaeger); a conspicuous *whitish band* across the *under sides of the wings* near the tip.

The Jaeger, or Jiddy Hawk, as the fishermen call it, is a spring and autumn migrant off the coast of New York and New England, occurring most commonly in August, September, and October. It is noted for its habit of pursuing terns and the smaller gulls till they drop the food which they have obtained; the Jaeger then seizes and devours it. Mr. Job ("Among the Water-Fowl," p. 117) says that the victim often disgorges half-digested food; I have seen only the freshly-caught fish dropped from the bill. To see Jaegers, one should watch the terns as they migrate along the coast in late summer; or, better still, sail with some fisherman to the fishing-ground off Chatham or Cape Sable. The chase is an interesting spectacle; the dark, hawk-like form of the Jaeger appears suddenly, and in an instant the two are off, twisting and turning, always close together; one can often see the Jaeger's claws struck forward.

Jaegers appear in almost every possible plumage, but will be at once recognized by their dark upper parts and hawk-like flight; they are always darker above than the bird that they pursue. The commonest species off our coast,

the Pomarine, is also the largest; it is not very much smaller than a Herring Gull; the next commonest is the Parasitic Jaeger. The two species resemble each other so closely in their various plumages that it is almost impossible to distinguish them except by their size when they appear together. The Long-tailed Jaeger is rare; in adult plumage its long tail-feathers will distinguish it. The other species often have the central pair of tail-feathers considerably longer than the rest.

DIVING BIRDS: ORDER PYGOPODES

AUKS, MURRES, AND PUFFINS: FAMILY ALCIDÆ

Four or five members of the family which includes the Auks, Murres, and Puffins, may be seen chiefly in winter off the coast of New England, and rarely off Long Island. Most of the Auks, Murres, and Puffins breed to the northward even of the Maine coast. A few Black Guillemots or Sea Pigeons breed along the northern coast of Maine, and are, therefore, regularly met with even in summer along that shore. A considerable colony of Puffins breed at the Machias Seal Island and a few pair on Matinicus Rock, but Brünnich's Murre and the Razor-billed Auk are found off the New England coast only in winter; and though a number of them migrate southward at that season to Massachusetts or Long Island, they frequent even then the rocky outer shores and are not often seen from the land. They all spend their time in the water, obtaining their food by diving. The Dovekie is an irregular winter visitant as far south as the New Jersey coast.

DOVEKIE. *Alle alle*

8.00

Ad. in winter and *Im.* — Upper parts black; under parts white; back here and there marked with white; bill short, black.

The Dovekie, or Knotty of the fisherman, is a rather irregular winter visitant off the coast, generally keeping well out at sea, but at rare intervals blown inland by severe storms. It should be recognized at once by its small size. Small flocks may be seen flying with rapid wing-strokes, close over the water, or floating on the waves. The birds seem tame, and at the approach of a boat they often dive instead of flying.

Razor-billed Auk. *Alca torda*

16.50

Ad. in summer. — Head, throat, and upper parts sooty-black; line from bill to eye, narrow line across wing, and under parts white; bill short and deep. *Ad. in winter.* — Similar, but throat, fore neck, and cheeks white; no white line from bill to eye. *Im.* — Similar to winter adult, but bill smaller.

The Razor-bill is an irregular winter visitant to the coast of New England and Long Island, occurring off rocky

Fig. 92. Razor-billed Auk, in Winter

shores. It gets its food by diving, and uses its wings under water to propel itself. Its pattern of black and white resembles very closely that of the Murre, but it may be distinguished by its deeper bill, and, when sitting on the water, by its *upturned tail.*

Brünnich's Murre. *Uria lomvia*

16.50

Ad. in summer. — Head, throat, and upper parts black; under parts and narrow line across wing white; bill long and stout, but not deep, as in the preceding species. *Ad. in winter.* — Similar, but fore neck, sides of head, and neck white. *Im.* — Similar to winter adult, but no white on sides of head, and fore neck tinged with dusky.

Brünnich's Murre is an irregular winter visitant to the coast of New England and Long Island Sound, generally

Fig. 93. Brünnich's Murre

rare, but at times occurring in considerable numbers. It occasionally appears on inland waters, apparently blown in by storms. It is then very tame, and permits a close approach. It dives for its food, and uses its wings to propel itself. Its coloration, black above and white below, will distinguish it from the other birds of its kind, except the Razor-bill. (See preceding species.)

Black Guillemot; Sea Pigeon. *Cepphus grylle*

13.00

Ad. in summer. — Entire plumage black, except a *broad white patch on the wing;* bill black; legs bright red. *Ad. in winter.* —

General effect when in the water white ; upper parts varied with black; *wing black, with white patch. Im.* — Similar to winter *ad.*, but wing-patch barred with black ; lower parts washed with dusky.

Nest, in crevices in rocks. *Eggs,* green, greenish-white, or white.

The Sea Pigeon breeds on rocky islands along the coast of Maine, from Knox County eastward ; there is a considerable colony on Little Duck Island, off Mt. Desert. In fall and winter it is met with along the whole of the Maine coast, and less commonly as far south as Wood's Hole, Mass. It feeds in the broad sheltered bays formed by the numerous islands along the Maine coast, riding easily on the water, and either diving when alarmed, or rising and flapping off with a peculiar paddling effect of the wings.

FIG. 94. Black Guillemot

It may be recognized in summer by its general black color, and by the broad patch of white in the black wing. In winter the general effect of the bird is white, the black bill showing clearly against the white head. Its wing, however, is still black with a patch of white. The Horned Grebe also has a white patch in the wing, but it does not show till the bird flies, whereas in the Sea Pigeon it is conspicuous as the bird sits in the water. The White-winged Coot and the Merganser, which also show white in the wing, are both much larger birds.

PUFFIN; SEA PARROT. *Fratercula arctica*

13.00

Ad. in summer. — Upper parts, together with a band across the fore neck, blackish; sides of head ashy-white; breast and belly white; *bill very deep, red;* feet red. *Ad. in winter* and *Im.* — Sides of head obscured with dusky; bill much smaller, parts having been shed.

Nest, either in a fissure of a cliff or in a short burrow. *Eggs,* dull white, speckled with pale brown, soon becoming stained.

The Puffin breeds from Matinicus Rock and Machias Seal Island, on the coast of Maine, northward, and in winter occurs as a rare visitant off rocky shores as far south as Cape Ann and Cohasset. It rides the water lightly, dives easily, and uses its wings to propel itself under water. In summer it may readily be identified by its triangular-shaped bill, and by the large whitish patches on the sides of the head.

LOONS: FAMILY GAVIIDÆ

Two species of Loon occur in New York and New England: the Red-throated Loon is a common migrant, and an uncommon winter visitant along the coast; the Loon is a summer resident of northern lakes, a migrant on other inland waters, and a migrant and winter visitant along the coast. When in adult plumage, the latter is easily distinguished; but in winter it can generally be told from its smaller relative only by its size. It is often difficult, also, to distinguish between Holbœll's Grebe and the Red-throated Loon (see p. 338).

RED-THROATED LOON. *Gavia lumme*

25.00

Ad. in summer. — Head and neck lead-gray; back of the neck streaked with white; fore neck rich chestnut; upper parts

speckled with white ; breast and belly white. *Ad. in winter* and *Im.* — Upper parts, wings, and tail blackish-brown, speckled with white ; throat, fore neck, and rest of under parts white.

The Red-throated Loon is a common migrant along the sea-coast in September and October, and again in April, and a not uncommon winter visitant. It occasionally occurs on large inland waters, as at Springfield, Mass., and on the Hudson. The adult breeding plumage with the red throat is very rare. Its feeding habits resemble those of the following species. The two species resemble each other so closely in winter that it is difficult to be sure of the smaller species unless there is something else to measure it by, or unless one gets near enough to see the white *speckling* on the back.

Loon. *Gavia imber*

32.00

Ad. in summer. — Head and throat black ; small white streaks on the throat and on the back of the neck ; back black, spotted with white ; breast and belly white. *Ad. in winter* and *Im.* — Upper parts brown, not spotted with white ; throat, fore neck, and under parts white.

Nest, a rude structure of rushes, very near the water. *Eggs*, brown or greenish-brown, sparingly spotted with dark brown.

The Loon is a summer resident of northern New York and New England, occurring sparingly on the more remote bodies of water from the neighborhood of Mt. Monadnock northward, and commonly in the wilder portions of Maine and of the Adirondacks. It is a common winter visitant off the coast of New York and New England, and may occur as a migrant in May and September on any inland pond or lake. It may be found during the summer on the coast of Maine, though it does not breed there.

Its weird notes are a familiar sound on the northern lakes or harbors : one, loud and clear, with a rising inflec-

tion in the middle, falling at the end; the other, quavering, like unearthly laughter. On the water, the Loon rides either high, so that its white breast is visible at a great distance, or so low that only its neck appears above water. It dives with a forward spring, heels over head. When it starts to fly, it patters over the surface for a long distance before it gets under way, and when there is no breeze, it cannot rise at all; on land, it is almost helpless. It flies with neck stretched out in front, feet out behind, the whole figure forming a slight curve; the wing strokes are rapid, suggesting a duck. It enters the water with a splash.

The adult bird, with its contrast of black and white, is unmistakable. Immature birds and adults in winter resemble very closely the preceding species; their greater size, however, should distinguish them if the two species are together, or on a near view the absence of the spotted back is a good field-mark.

GREBES: FAMILY PODICIPIDÆ

Three species of Grebe occur in New York and New England: the Horned Grebe and Holbœll's Grebe are common off the coast as migrants or winter visitants; the Pied-billed Grebe is found either as a migrant or as a rare summer resident on inland waters. Grebes are noted for their powers of diving quickly, and of swimming long distances under water. They can also sink in the water, so that only the bill and a small portion of the head appear; sometimes they disappear wholly in this way, but as a rule they leap forward, showing a clean pair of "heels." It is often difficult to distinguish between Holbœll's Grebe and the Red-throated Loon. If the two occur together, the Loon's greater size is apparent; if the wing is spread, the Grebe shows a white patch. The longer neck and narrow head distinguish a Grebe from a diving duck.

Pied-billed Grebe. *Podilymbus podiceps*

13.50

Ad. in summer. — *Middle of throat black;* sides of head gray; top of head, back, wings, and tail dark grayish-brown; neck and breast brownish; belly whitish; bill whitish, crossed in the middle by a black band. *Ad.* ♂ *in fall.* — Upper parts sooty-brownish; throat whitish; *fore neck, breast, and sides brown;* rest of under parts silvery-whitish; wing often shows a little white when spread. *Ad.* ♀ and *Im. in fall.* — Similar, but paler.

Nest, a mass of stalks, sometimes floating, and attached to surrounding reeds. *Eggs,* dull-white, generally stained.

The Pied-billed Grebe, Dabchick, or Hell-diver, is a local summer resident of New York and New England. It breeds in quiet lagoons in ponds or lakes, where reedy shores or a growth of water-loving bushes give it shelter. Such conditions are commonest in Maine, but it breeds also in a few ponds in southern New Hampshire and in Berkshire County, Mass., and undoubtedly in Vermont and northern Connecticut. In the Hudson Valley and in the vicinity of New York it is rare in summer. Throughout New York and New England it is a regular spring and autumn migrant in April, and in September and October. It may then occur on any bit of inland water, particularly where there are sheltered bays, and in the brackish lagoons along the sea-coast. It is rarely seen in the sea itself.

The ease with which the Pied-billed Grebe dives is notorious; sometimes it turns a clean pair of "heels," sometimes it sinks gently down till only its bill is exposed. Its notes are extremely loud and striking; the commonest is a loud *cuck-cuck-cuck-cuck, kow, kow, kow,* that suggests the notes of a cuckoo. A rarer note is a loud *wah'-hoo, wah'-hoo, wah'-hoo,* suggesting, in the quality of the tone, the call of the Loon. It has also an alarm-note, a low *toot, toot, toot.*

The brownish fore neck and upper breast will distinguish

this grebe in autumn from the following species, which has pure white under parts. In spring and summer, adults have a small black patch in the middle of the throat; the black band across the middle of the whitish bill shows only at close range.

Horned Grebe. *Colymbus auritus*

13.50

Ad. in late spring. — Top of head and hind neck black; two patches of light reddish-brown back of eye; sides of head and throat black; the feathers on the sides of the head stand out and form broad tufts; fore neck below the throat and flanks reddish-brown; back and wings blackish; *wing-patch white. Ad. in winter* and *Im.* — Top of head, hind neck, back, and wings blackish; throat and sides of head below eye white; fore neck below throat lightly washed with dusky; rest of under parts silvery-white; *wing-patch white.*

Nest, a bed of reeds, often floating. *Eggs,* dull white.

The Horned Grebe is a common migrant along the sea-coast in October and November, and in March and April; it also occurs as a migrant on inland waters, especially in the autumn, but except on large streams and lakes is not nearly so common inland as the preceding species. Along the sea-coast it is a common winter visitant; it breeds sparingly in northeastern Maine (Knight). It is occasionally seen in spring in the breeding plumage, when its "ruff" of black and yellowish-brown is a striking sight; but ordinarily it is blackish-brown above and white below. It may always be distinguished from the preceding species by the

Fig. 95. Horned Grebe, in Winter

pure white of its under parts, and when it opens its wings by the *white wing-patch.* (See, also, the following species.)

Holbœll's Grebe. *Colymbus holbœllii*

19.00

Ad. in late spring. — Top of head and hind neck black; back and wings blackish; throat and *sides of head grayish-white;* fore neck brownish-red, deepening on the sides; breast white, spotted with reddish; belly silver-white; wing-patch white. *Ad. in early fall.* — Similar to above, but the red paler, often very pale. *Ad. in winter* and *Im.* — Upper parts blackish; throat whitish; *neck brownish;* under parts whitish; wing-patch white.

Holbœll's Grebe is a common migrant along the coast in October, and in April and May, and a rather uncommon winter visitant. It comes fairly close in-shore, sometimes in company with others of its species, often with the Horned Grebe or the loons. When with the Horned Grebe, its larger size is evident; when alone, its brownish fore neck will distinguish it from its smaller relative. The Red-throated Loon, however, though evidently larger when seen with Holbœll's Grebe, complicates the problem, and often makes the identity of a lone diving bird of medium size a puzzling question. If the bird is a grebe, the *white wing-patch* will show when it shakes its wings or flies. A grebe's flight, too, is not so steady and strong as that of a loon, nor does its neck seem so thick. If the upper parts can be seen at close range, the white spots on the loon will distinguish it.

APPENDIX

APPENDIX

A

LISTS OF BIRDS BREEDING IN THE THREE LIFE-ZONES OF NEW ENGLAND AND EASTERN NEW YORK

The lists given below are intended to show about what birds may be looked for in the breeding season in the regions defined in the map on p. 15. They must not, however, be taken too strictly; birds will sometimes appear side by side that belong to wholly different groups. Particularly is this true of the upland of western and central New England, which is an ornithological borderland. (See Distribution, p. 13.) Moreover, the exact distribution of birds in certain regions is not yet well known; southern Vermont is still quite unexplored. But if no local list is obtainable (see Appendix B), then these lists will enable a student to make a tentative list of birds to be looked for. The lists include only such water-birds as breed commonly inland, and only the commoner hawks and owls.

I

BIRDS RESTRICTED TO THE UPPER AUSTRAL ZONE.

a. *North to the Palisades, Staten Island, or Central Park.*

Tufted Titmouse.
Carolina Wren.
Kentucky Warbler.
Cardinal.

b. *Up the Hudson to Sing Sing.*

Green-crested Flycatcher.

c. *Locally in southern Connecticut as far east as Saybrook and north to Hartford.*

Hooded Warbler.
Blue-winged Warbler.
Worm-eating Warbler.
Rough-winged Swallow.
Fish Crow (not west or north of Stratford).

d. *Salt Marshes to Point Judith, R. I.*

Seaside Sparrow.

e. *To Rhode Island and to Berkshire County, Mass.*

Louisiana Water-thrush (local in the eastern and northern portions of its range).

f. *To Berkshire and Essex counties, Mass.*

Yellow-breasted Chat.
White-eyed Vireo (barely reaches Berkshire County).
Orchard Oriole.
} Local north or east of southern Connecticut.

II

BIRDS OCCURRING IN THE UPPER AUSTRAL, AND FINDING THEIR NORTHERN BREEDING LIMIT IN THE TRANSITION ZONE.

a. *Barely reaching southeastern New Hampshire; not occurring in Berkshire County.*

Prairie Warbler.
Golden-winged Warbler.
} Absent near New York city.

b. *Found north of Massachusetts only in large river valleys.*

Wood Thrush (occasional outside of the valleys).
Yellow-throated Vireo.
Meadowlark.
Yellow-billed Cuckoo.
Ruffed Grouse (this subspecies not found north of Massachusetts).

c. *Absent in New Hampshire from the valleys of the White Mountains.*[1]

House Wren (occasional north of the White Mountains).
Pine Warbler (absent near New York city).
Yellow Warbler.
Purple Martin.
Towhee.
Henslow's Sparrow. } Apparently absent from Maine.
Grasshopper Sparrow. }
Crow Blackbird.
Cowbird.
Bobolink.
Sparrow Hawk.
Red-shouldered Hawk.
Marsh Hawk.
Quail.
Upland Plover.
Green Heron.

d. *Breeding well up into the valleys of the White Mountains.*

Bluebird.
White-bellied Nuthatch.
Brown Thrasher.
Catbird.
Warbling Vireo.
Migrant Shrike.
Scarlet Tanager.
Indigo Bunting.
Field Sparrow.
Chipping Sparrow.
Vesper Sparrow.
Baltimore Oriole.
Red-winged Blackbird.
Prairie Horned Lark.
Least Flycatcher.
Phœbe.
Crested Flycatcher.
Kingbird.

[1] The following lists are a little altered from those given in G. M. Allen's *Birds of New Hampshire*.

Flicker.
Nighthawk.
Whip-poor-will.
Screech Owl.

III

BIRDS FOUND THROUGHOUT THE UPPER AUSTRAL AND TRANSITION ZONES, AND ALSO IN THE CANADIAN ZONE.

Robin.
Veery.
Chickadee.
Redstart.
Northern Yellow-throat.
Oven-bird.
Black and White Warbler.
Red-eyed Vireo.
Cedar-bird.
Bank Swallow.
Tree Swallow.
Barn Swallow.
Cliff Swallow.
Rose-breasted Grosbeak.
Swamp Sparrow.
Song Sparrow.
American Goldfinch.
American Crow.
Blue Jay.
Wood Pewee.
Ruby-throated Hummingbird.
Chimney Swift.
Belted Kingfisher.
Black-billed Cuckoo.
Spotted Sandpiper.

IV

BIRDS FOUND IN THE TRANSITION AND CANADIAN ZONES, BUT RARE OR ABSENT FROM SOUTHERN CONNECTICUT AND THE VICINITY OF NEW YORK CITY.

Hermit Thrush (rare in the Transition Zone).
Black-throated Green Warbler.
Northern Parula Warbler.

Nashville Warbler.
Solitary Vireo (rare in the Transition Zone).
Savannah Sparrow.
Purple Finch.
Olive-sided Flycatcher (rare in the Transition Zone).
Hairy Woodpecker (rather uncommon near New York city).
Canadian Ruffed Grouse (absent south of Massachusetts).

V

BIRDS NOT FOUND SOUTH OF THE CANADIAN ZONE.

a. *Throughout the Canadian Zone.*

Olive-backed Thrush.
Golden-crowned Kinglet.
Red-bellied Nuthatch.
Winter Wren.
Myrtle Warbler.
Junco.
White-throated Sparrow.

b. *Only in part of the Canadian Zone. Not found in the White Mountains above* 3000 *feet.*

Brown Creeper.
Canadian Warbler.
Mourning Warbler.
Water-thrush.
Blackburnian Warbler.
Black and Yellow Warbler.
Black-throated Blue Warbler.
American Crossbill.
Alder Flycatcher.
Northern Pileated Woodpecker.
Yellow-bellied Sapsucker.

c. *Only in the upper or northern part of the Canadian Zone. In the White Mountains above* 3000 *feet, and in northern and eastern Maine.*

Bicknell's Thrush.
Hudsonian Chickadee
Wilson's Warbler (only in eastern and northern Maine).

Yellow Palm Warbler (only in eastern and northern Maine).
Black-poll Warbler.
Bay-breasted Warbler (on the White Mountains as low as 1800 feet).
Cape May Warbler.
Tennessee Warbler.
Pine Siskin.
White-winged Crossbill.
Canadian Pine Grosbeak.
Rusty Blackbird (only in northern and eastern Maine).
Canada Jay.
Yellow-bellied Flycatcher.
American Three-toed Woodpecker.
Arctic Three-toed Woodpecker.
Canadian Spruce Grouse.

B

BOOKS OF REFERENCE

The books listed below will, it is believed, furnish the necessary amount of additional information about the birds treated in this Guide; but no attempt has been made to make the list exhaustive, and many excellent books have been omitted.

I

MANUALS GIVING A DESCRIPTION AND ACCOUNT OF EACH BIRD.

Handbook of Birds of Eastern North America. F. M. Chapman. D. Appleton & Co., New York.

The Land-Birds and Game-Birds of New England. H. D. Minot. 3d ed. Edited by William Brewster. Houghton, Mifflin & Co., Boston.

Birds of Village and Field. Florence A. Merriam. Houghton, Mifflin & Co., Boston.

Our Birds in Their Haunts. J. Hibbert Langille. (Out of print and hard to obtain.)

Bird-Life. F. M. Chapman. D. Appleton & Co., New York.

The Water-Fowl Family. Leonard C. Sanford and others. The Macmillan Co., New York.

II

TREATISES ON BIRD-LIFE IN GENERAL.

Among the Water-Fowl. H. K. Job. Doubleday, Page & Co., New York.

Wild Wings. H. K. Job. Houghton, Mifflin & Co., Boston.

The Bird Book. Fannie Hardy Eckstorm. D. C. Heath & Co., Boston.

The Woodpeckers. Fannie Hardy Eckstorm. Houghton, Mifflin & Co., Boston.

III

LOCAL LISTS, GIVING THE BIRDS THAT OCCUR IN ANY ONE REGION OR LOCALITY.

New York.

Visitors' Guide to the Collection of Birds found within Fifty Miles of New York City. F. M. Chapman. (For sale at the American Museum of Natural History, New York.)

The Summer Birds of the Catskill Mountains. E. P. Bicknell. Transactions of the Linnæan Society of New York, vol. i. pp. 115–168. (Difficult to obtain.)

Birds of the Hudson Highlands. E. A. Mearns. Bulletin Essex Institute, vol. x. pp. 166–179; vol. xi. pp. 43–52, 154–168, 189–204; vol. xii. pp. 11–25, 109–128; vol. xiii. pp. 75–93.

New Jersey.

Birds of Princeton and vicinity. W. A. Babson, Princeton, N. J.

Connecticut.

Birds of Bridgeport, Conn. C. K. Averill. Bridgeport Scientific Society.

Birds of Connecticut. C. Hart Merriam. Proc. Conn. Acad., July, 1877.

Rhode Island.

Birds of Rhode Island. Howe and Sturtevant. (Apply to Edward Sturtevant, Newport, R. I.)

Massachusetts.

Birds of Massachusetts. Howe and Allen. (Apply to R. H. Howe, Jr., Concord, Mass.)

Birds of the Cambridge Region. William Brewster. Nuttall Ornithological Club, Cambridge, Mass.

Birds of Essex County. Dr. C. W. Townsend. Nuttall Ornithological Club, Cambridge, Mass.

Birds of Wellesley. A. P. Morse, Wellesley, Mass.

Birds of Springfield and Vicinity. R. W. Morris, Springfield, Mass.

Birds of Berkshire County. W. Faxon and R. Hoffmann. Berkshire Historical and Scientific Society, Pittsfield, Mass. (Hard to obtain.)

New Hampshire.

Birds of New Hampshire. G. M. Allen. Proc. Manchester Inst. of Arts and Sciences, Manchester, N. H.

Birds of Belknap and Merrimac Counties. Ned Dearborn, Durham, N. H.

Birds of Durham and Vicinity. Ned Dearborn. New Hampshire Agric. Coll., Durham, N. H.

Summer Birds of Holderness and Franconia, N. H. Faxon and Allen. Auk, vol. v. pp. 149–155.

Summer Birds of the Presidential Range, White Mountains. A. P. Chadbourne. Auk, vol. iv. pp. 100–108.

Vermont.

Birds Found in Vermont. George H. Perkins. State Board of Agriculture, Montpelier, Vt.

A Review of Prof. George H. Perkins's List. R. H. Howe, Jr., Concord, Mass.

Maine.

Birds of Maine. O. W. Knight, Bangor, Me. (Hard to obtain.)

Birds of Portland. N. C. Brown. Proc. Port. Soc. Nat. Hist. (Hard to obtain.)

IV

MAGAZINES.

Bird-Lore. Bi-monthly. Edited by F. M. Chapman. Illustrated. One dollar a year. The Macmillan Co., Harrisburg, Pa. (Contains each year the name of some one in each state who will answer questions about birds.)

The Auk. Quarterly. More technical. Three dollars a year. Dr. J. Dwight, Jr., New York City.

WALL CHARTS.

Audubon Bird Charts, No. I., No. II., contain together fifty-six birds in colors. Prang Educational Co., Boston.

Bird-Lore Chart. Sixty-two representative birds, not colored. The Macmillan Co., Harrisburg, Pa.

Wall Chart. A. W. Mumford, Chicago.

Colored pictures from Birds and Nature may be obtained from the Perry Picture Co.

FIELD NOTE-BOOKS.

Bird-Lore's Field Identification Blank. J. Horace McFarland Co., Harrisburg, Pa.

Field Note-Book. Miss J. A. Clark, 1322 Twelfth Street, N. W., Washington, D. C.

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